

# **North Country Telemedicine Project (NCTP)**

## **April 29, 2011**

### **Quarterly Data Report #12**

Changes and/or additions made in Quarter 12 and items that do not currently apply, are in red.

#### **1. Project Contact and Coordination Information**

##### **a. Identify the project leader(s) and respective business affiliations.**

Denise Young, Project Coordinator  
Executive Director  
Fort Drum Regional Health Planning Organization

Robert P. Hunt, Associate Project Coordinator  
Regional Telemedicine Program Manager  
Fort Drum Regional Health Planning Organization

##### **b. Provide a complete address for postal delivery and the telephone, fax, and e-mail address for the responsible administrative official.**

Fort Drum Regional Health Planning Organization  
Denise Young, Executive Director  
120 Washington St., Suite 302  
Watertown, New York 13601  
Telephone: 315-755-2020  
Fax: 315-755-2022  
E-mail: [dyoung@fdrhpo.org](mailto:dyoung@fdrhpo.org)

##### **c. Identify the organization that is legally and financially responsible for the conduct of activities supported by the award.**

Fort Drum Regional Health Planning Organization

##### **d. Explain how project is being coordinated throughout the state or region.**

- We hold meetings with technical, clinical, and administrative staff at participating entities.
- We do site visits to each participating site to assess telecommunications infrastructure status and issues.
- We coordinate our activities with representatives of the New York State Department of Health, New York State Office of Mental Health, County Public Health Agencies, and Department of Defense/Fort Drum Organizations.
- We coordinate our activities with representatives of local, county, state, and federal legislative entities.

## 2. Identify all health care facilities included in the network.

- a. **Provide address (including county), zip code, Rural Urban Commuting Area (RUCA) code (including primary and secondary), six-digit census tract, and phone number for each health care facility participating in the network.**

Detailed address/location information for all health care facilities included in the NCTP network is provided in the Table on Page 3.

NOTE: We were unable to determine Secondary RUCA Codes from the USAC-provided link to the RUCA Code contractor web site and associated links. Primary RUCA codes are included in Table 1, presented on Page 3.

One additional site ,Claxton-Hepburn Medical Center, has been added to this network in Quarter 3, as this site offers inpatient specialty services utilized by the network sites and with the Fort Drum MEDDAC choosing to pay all their own costs at a future date it made it possible to include this additional site.

In Quarter 6, one of the original sites, E. J. Noble Antwerp Health Center, has moved from 64 Main St, Antwerp, NY, 13608 to 6 Lexington Avenue, Antwerp, NY, 13608. The move has no impact on the cost of connecting this location to the fiber network by our ISP (Development Authority of the North Country). The clinic received a Rural Healthcare Grant of \$110, 000.00 that allowed them to build a new clinic at the 6 Lexington Avenue location. A new Letter of Agency has been uploaded to SharePoint that reflects the change of address.

In Quarter 7, one of the original sites, CAH/VA Clinic was removed from the NCTP network. The VA contract with Carthage Area Hospital (CAH) was not renewed with CAH. The new VA contract was awarded to a "for profit" entity that was not eligible to be part of the Rural Healthcare Pilot Program (RHCPP). CAH opened a new clinic, CAH/Medical Center, at the same location that had been occupied by the CAH/VA. CAH/Medical Center is eligible to participate in the RHCPP and has been added to the NCTP network as a replacement for the CAH/VA. No additional RHCPP funds were required to substitute to the CAH/Medical Center for the CAH/VA.

In Quarter 8, one of the original sites, SMC Clinic/Plaza Family Health Center, has moved from 1575 Washington St., Watertown, NY 13601 to 26908 Independence Way, Evans Mills, 13637. The move has no impact on the cost of connecting this location to the fiber network by our ISP (Development Authority of the North Country). The new location was completed sooner than expected and the original facility was not large enough to meet the needs of the community. A new Letter of Agency has been uploaded to SharePoint that reflects the change of address. No additional RHCPP funds were required to move the SMC Clinic/Plaza Family Health Center to the new location.

In Quarter 12, one of the original sites, CAH/Cape Vincent Family Health Center, has moved from 400 S. Esselstyene Street, Cape Vincent, NY 13618 to 782-790 Broadway Street, Cape Vincent, NY 13618. The non-recurring cost (NRC) to connect the new location to the NCTP network is \$6,000.00. The customer (CAH/Cape Vincent Family Health Center) will pay 100% of this cost. There is no change in the monthly recurring cost (MRC) between the new location and the old location. The clinic moved because the building they were in was outdated and the village of Cape Vincent built them a new clinic to be housed out of due to the age of the physical plant at the site they used to occupy. The old site was leased through the village of Cape Vincent and the Cape Vincent Board of Directors wanted a new site for their clinic.

In Quarter 12 a For-Profit site was added to the NCTP network. Northern Radiology Imaging (NRI) was added during this quarter. NRI is located at 1572 Washington St., Watertown, NY 13601. The connection is a 10 Mbps fiber-Ethernet connection. The non-recurring cost (NRC) to connect this site to the NCTP network was \$1,000.00. The monthly recurring cost (MRC) for this site is \$1000.00 a month for 24 months and \$200.00 a month for 24 months. The total MRC period is 48 months. All of the costs, NRC and MRC, are 100% paid for by NRI with no funds allocated from any other source (RHCPP, federal or state grants). NRI provides the following medical services: MRI, CT Scan, X-Ray, Women's Imaging, GI Study, Digital Mammography, Breast Biopsy, Bone Density Scan, IVP and VCUG.

Table 1. North Country Telemedicine Project (NCTP) Participating Sites - Location Information								
Site	Organization	Address	County	City	Zip Code	RUCA Code	Census Tract Code	Phone
1	Canton-Potsdam Hospital	50 LeRoy St.	St. Lawrence	Potsdam	13676	7	9909	315-265-3300
2	Carthage Area Hospital (CAH)	1001 West St.	Jefferson	Carthage	13619	5	60900	
3	CAH/Cape Vincent Family Health Center	782-790 Broadway Street	Jefferson	Cape Vincent	13618	5	603	315-654-2530
4	CAH/Evans Mills Family Health Center	26121 US Highway 11	Jefferson	Evans Mills	13637	4	606	315-629-1304
5	CAH/Philadelphia Physical Therapy Clinic	32787 US Highway 11	Jefferson	Philadelphia	13673	4	606	315-642-0216
6	Carthage Mental Health Clinic	3 Bridge St.	Jefferson	Carthage	13619	5	610	315-493-3300
7	CAH/Medical Center	3 Bridge St.	Jefferson	Carthage	13619	5	610	315-493-4187
8	Clifton-Fine Hospital	1014 Oswegatchie Trail	St. Lawrence	Star Lake	13690	10	9925	315-848-3351
9	Crouse Hospital	736 Irving Ave.	Onondaga	Syracuse	13210	1	43	315-470-7111
10	E. J. Noble (EJN) Health Center	2924 County Route 17	St. Lawrence	De Kalb Junction	13630	10	9918	315-347-3830
11	E. J. Noble (EJN) Health Center	6 Lexington Avenue	Jefferson	Antwerp	13608	5	607	315-659-8993
12	E. J. Noble (EJN) Hospital	77 West Barney St.	St. Lawrence	Gouverneur	13642	7	9927	315-287-1000
13	Jefferson County Public Health Service	531 Meade St.	Jefferson	Watertown	13601	4	614	315-786-3770
14	Lewis County Community Mental Health Center	7550 S. State St	Lewis	Lowville	13367	7	9503	315-376-5450
15	Lewis County General Hospital	7785 N. State St	Lewis	Lowville	13367	7	9503	315-376-5200
16	St. Elizabeth Medical Center	2209 Genesee St.	Oneida	Utica	13501	1	217.01	315-798-8100
17	North Country Children's Clinic	238 Arsenal St.	Jefferson	Watertown	13601	4	621	315-782-9450
18	River Hospital	4 Fuller St.	Jefferson	Alexandria Bay	13607	10	601	315-482-2511
19	Samaritan Medical Center (SMC)	830 Washington St.	Jefferson	Watertown	13601	4	619	315-785-4000
20	SMC Mental Health Clinic	1575 Washington St.	Jefferson	Watertown	13601	4	622	315-785-5785
21	SMC Clinic/Plaza Family Health Center	26908 Independence Way	Jefferson	Evans Mills	13637	4	60600	(315) 629-4525
22	SMC Clinic/Fort Drum Outpatient Mental Health Clinic	165 Coleman Avenue	Jefferson	Watertown	13601	4	615	315-780-8615
23	SMC Clinic/Family Health Center	909 Strawberry Lane	Jefferson	Clayton	13624	10	602	315-686-2094
24	SMC Urology Clinic	19320 U. S. Highway 11	Jefferson	Watertown	13601	5	624	315-785-4000
25	St. Joseph's Hospital	301 Prospect St.	Onondaga	Syracuse	13203	1	23	315-448-5111
26	St. Lawrence County Public Health Department	80 State Hwy 310	St. Lawrence	Canton	13617	7	9920	315-386-2325
27	SUNY Upstate Medical Center	750 E. Adams St.	Onondaga	Syracuse	13210	1	43	315-464-5540
28	Claxton-Hepburn Medical Center	214 King Street	St. Lawrence	Ogdensburg	13669	4	9916	315-393-3600
29	Northern Radiology Imaging	1572 Washington St.	Jefferson	Watertown	13601	4	622	315-786-5056

**b. For each participating institution, indicate whether it is:**

- i. Public or non-public**
- ii. Not-for-profit or for-profit;**
- iii. An eligible health care provider or ineligible health-care provider with an explanation of why the health care facility is eligible under section 254 of the 1996 Act and the Commission's rules or a description of the type of ineligible health care provider entity.**

1	Canton-Potsdam Hospital	50 Leroy St.	Potsdam	13676	Non-Public	Not-for-Profit	Hospital licensed under New York State Department of Health, in accordance with New York State Law, Article 28
2	Carthage Area Hospital (CAH)	1001 West St.	Carthage	13619	Non-Public	Not-for-Profit	Hospital licensed under New York State Department of Health, in accordance with New York State Law, Article 28
<b>Table 2. North Country Telemedicine Project (NCTP) Participating Sites - Eligibility Information</b>							
<b>Facility</b>	<b>CAH/Organization</b>	<b>782-790 Address Street</b>	<b>City</b>	<b>Zip Code</b>	<b>Public or Non-Public</b>	<b>Not-for-Profit or For-Profit</b>	<b>Community Health Clinic licensed under New York State Department of Health, in accordance with New York State Law, Article 28</b>
1	Canton-Potsdam Hospital	50 Leroy St.	Potsdam	13676	Non-Public	Not-for-Profit	Hospital licensed under New York State Department of Health, in accordance with New York State Law, Article 28
4	CAH/Evans Mills Family Health Center	Highway 11, Suite 5	Evans Mills	13637	Non-Public	Not-for-Profit	Community Health Clinic licensed under New York State Department of Health, in accordance with New York State Law, Article 28
5	CAH/Philadelphia Physical Therapy Clinic	32787 U.S. Highway 11	Philadelphia	13673	Non-Public	Not-for-Profit	Community Health Clinic licensed under New York State Department of Health, in accordance with New York State Law, Article 28
6	Carthage Mental Health Clinic	3 Bridge St.	Carthage	13619	Non-Public	Not-for-Profit	Community Mental Health Clinic Licensed by the New York State Office of Mental Health, in accordance with New York State Law, Article 28
7	CAH/Medical Center	3 Bridge St.	Carthage	13619	Non-Public	Not-for-Profit	Community Health Clinic licensed under New York State Department of Health, in accordance with New York State Law, Article 28
8	Clifton-Fine Hospital	1014 Oswegatchie Trail	Star Lake	13690	Non-Public	Not-for-Profit	Hospital licensed under New York State Department of Health, in accordance with New York State Law, Article 28
9	Crouse Hospital	736 Irving Ave.	Syracuse	13210	Non-Public	Not-for-Profit	Hospital licensed under New York State Department of Health, in accordance with New York State Law, Article 28
10	E. J. Noble (EJN)/De Kalb Junction Health Center	2924 County Route 17	De Kalb Junction	13630	Non-Public	Not-for-Profit	Community Health Clinic licensed under New York State Department of Health, in accordance with New York State Law, Article 28
11	E. J. Noble (EJN)/Antwerp Health Center	6 Lexington Avenue	Antwerp	13608	Non-Public	Not-for-Profit	Community Health Clinic licensed under New York State Department of Health, in accordance with New York State Law, Article 28
12	E. J. Noble (EJN) Hospital	77 W. Barney St.	Gouverneur	13642	Non-Public	Not-for-Profit	Hospital licensed under New York State Department of Health, in accordance with New York State Law, Article 28
13	Jefferson County Public Health Service	531 Meade St.	Watertown	13601	Public	Not-for-Profit	County Public Health Facility Licensed under New York State Department Of Health

Detailed eligibility information for all health care facilities included in the NCTP network is provided below in Table 2. One site has been added in Quarter 3 and one site moved to a different address in Quarters 6 and 8. One entity (CAH/VA) was replaced by another entity (CAH/Medical Center) in Quarter 7.

Table 2 (continued) North Country Telemedicine Project (NCTP) Participating Sites - Eligibility Information							
Facility	Organization	Address	City	Zip Code	Public or Non-Public	Not-for-Profit or For-Profit	Eligibility Criteria
14	Lewis County Community Mental Health Center	7550 S. State St.	Lowville	13367	Public	Not-for-Profit	Community Mental Health Clinic Licensed by the New York State Office of Mental Health, in accordance with New York State Law, Article 28
15	Lewis County General Hospital	7785 N. State St.	Lowville	13367	Public	Not-for-Profit	Hospital licensed under New York State Department of Health, in accordance with New York State Law, Article 28
16	St. Elizabeth Medical Center	2209 Genesee St. (Telecommunications Room is located at 2212 Genesee St.)	Utica	13501	Non-Public	Not-for-Profit	Hospital licensed under New York State Department of Health, in accordance with New York State Law, Article 28
17	North Country Children's Clinic	238 Arsenal St.	Watertown	13601	Non-Public	Not-for-Profit	Community Health Clinic licensed under New York State Department of Health, in accordance with New York State Law, Article 28
18	River Hospital	4 Fuller St.	Alexandria Bay	13607	Non-Public	Not-for-Profit	Hospital licensed under New York State Department of Health, in accordance with New York State Law, Article 28
19	Samaritan Medical Center(SMC)	830 Washington St.	Watertown	13601	Non-Public	Not-for-Profit	Hospital licensed under New York State Department of Health, in accordance with New York State Law, Article 28
20	SMC Mental Health Clinic	1575 Washington St.	Watertown	13601	Non-Public	Not-for-Profit	Community Mental Health Clinic Licensed by the New York State Office of Mental Health, in accordance with New York State Law, Article 28
21	SMC Clinic/Plaza Family Health Center	26908 Independence Way	Evans Mills	13637	Non-Public	Not-for-Profit	Community Health Clinic licensed under New York State Department of Health, in accordance with New York State Law, Article 28
22	SMC Clinic/Fort Drum Outpatient Mental Health Clinic	165 Coleman	Watertown	13601	Non-Public	Not-for-Profit	Community Mental Health Clinic Licensed by the New York State Office of Mental Health, in accordance with New York State Law, Article 28
23	SMC Clinic/Family Health Center	909 Strawberry Lane	Clayton	13624	Non-Public	Not-for-Profit	Community Health Clinic licensed under New York State Department of Health, in accordance with New York State Law, Article 28
24	SMC Urology Clinic	19320 U.S. Highway 11	Watertown	13601	Non-Public	Not-for-Profit	Community Health Clinic licensed under New York State Department of Health, in accordance with New York State Law, Article 28
25	St. Joseph's Hospital	301 Prospect St.	Syracuse	13203	Non-Public	Not-for-Profit	Hospital licensed under New York State Department of Health, in accordance with New York State Law, Article 28
26	St. Lawrence County Public Health Department	80 State Highway 310	Canton	13617	Public	Not-for-Profit	County Public Health Facility Licensed under New York State Department Of Health
27	SUNY Upstate Medical Center	750 East Adams St.	Syracuse	13210	Public	Not-for-Profit	Hospital licensed under New York State Department of Health, in accordance with New York State Law, Article 28
28	Claxton Hepburn Medical Center	214 King Street	Ogdensburg	13669	Non-Public	Not-for-Profit	Hospital licensed under New York State Department of Health, in accordance with New York State Law, Article 28
29	Northern Radiology Imaging	1572 Washington St.	Watertown	13601	Non-Public	For-Profit	NRI provides the following medical services: MRI, CT Scan, X-Ray, Women's Imaging, GI Study, Digital Mammography, Breast Biopsy, Bone Density Scan, IVP and VCUG

**3. Network Narrative: In the first quarterly report following the completion of the competitive bidding process and the selection of vendors, the selected participant must submit an updated technical description of the communications network that it intends to implement, which takes into account the results its network design studies and negotiations with its vendors. This technical description should provide, where applicable:**

- a. Brief description of the backbone network of the dedicated health care network, e.g., MPLS network, carrier-provided VPN, a SONET ring;**

The Development Authority of the North Country (DANC) has created the Open Access Telecommunications Network (OATN). The core of the OATN is built on a SONET OC-192 platform. The OC-192 platform provides 10 GB/s of bandwidth that can be delivered to other Carriers and end-users as TDM (DS-1/DS-3, OC-X), Ethernet and ATM Switching. The backbone is comprised of an OC-192 with ten (10) network elements installed in Points of Presence (POPs) on the main ring. Lowville is connected via an OC-48 subtending ring. DANC has established POPs in the North Country, all of which provide connectivity to a gateway in Syracuse, NY. The POPs include:

- Watertown
- Gouverneur
- Canton
- Potsdam
- Massena
- Ogdensburg
- Alexandria Bay
- Lowville
- Pulaski
- Syracuse

The ten (10) POPs provide services that support all TDM and IP-based applications, including Internet, Video/Distance Learning, Storage Area Networks (SANs), Telemedicine and other advanced applications.

DANC's OATN was constructed and is operated in compliance with the highest industry standards. Their physical infrastructure follows Telcordia standards. Equipment placed in DANC central offices meets NESC and NEBS Level III certification requirements and transmission protocols are dictated by IEEE. More specifically, the OATN uses IEEE 802.17 Resilient Packet Ring (RPR) technology to deliver Layer 2 Ethernet services leveraging the reliability and redundancy of SONET. This design allows DANC to deliver data rates of 10 Mb/s, 100 Mb/s and 1 Gb/s and provide sub-50 millisecond restoration times.

In addition to the fiber infrastructure Westelcom Network Inc. will provide the member sites with High Capacity Internet Access Services over the NCTP Fiber Network. The total size of the connection to the public Internet will be between 300Mbps and 500Mbps (to be determined by mid-February 2010).

Westelcom has deployed a highly reliable Communications Network that expands throughout the 134 and 136 LATAs with core TDM and IP switching located in Plattsburgh, NY and Watertown, NY. The SONET network is diverse and has redundant connectivity to the PSTN, IXC's, Internet and Internet 2. The network is integrated with the Independent Optical Network (ION), a statewide fiber network interconnecting with all telecommunications carriers. This network is used to deliver advanced telecommunications and high-speed data services to over 22,000 residential and business customers located throughout Clinton, Essex, Franklin, St. Lawrence, Jefferson and Lewis counties.

Westelcom will manage ingress/egress to the public Internet for the NCTP locations. The ingress/egress point will be located in the Development Authority of the North Country's (DANC) Syracuse Point of Presence (PoP). The location will act as a service point for multiple individual public Internet circuits to the NCTP members. The circuits to each NCTP member can vary in size, of any size within the total aggregated bandwidth (TBD) at 1Mb/s increments.

**b. Explanation of how health care provider sites will connect to (or access) the network, including the access technologies/services and transmission speeds;**

The broadband service will be connected to specific customers (listed in Table 2) via single-mode Corning SMF-28E fiber optic cable constructed as later cables from the existing OATN ring backbone facility. This cable facility will be placed in the communications space of jointly owned service poles as well as buried per DANC's construction practices. Actual facility placement will be defined at final engineering. Optical fiber will be terminated in a single rack unit (RU), 12-fiber distribution panel (FDP). FDP's will be placed in existing wall mount or floor mounted communications racks.

A layer two (L2) Ethernet switch will be placed directly below the FDP and connected via single-mode optical fiber jumpers. The L2 Ethernet switch will serve as the customer demarcation point and the Ethernet services will be delivered via a copper port assigned by DANC. Port assignments will be determined at final engineering completion.

Ethernet services for the Syracuse and Utica hospital locations will be provided by a third party service provider from the hospital locations to the carrier hotel and 109 South Warren Street, Syracuse, New York. These services will terminate in DANC's central office located at the carrier hotel and then transported via the DANC network to the North Country service area.

IEEE 802.1Q VLAN tagging will be utilized to provide separate logical paths between FDRHPO sites (listed in Table 2). Available bandwidths include, but are not limited to, 10 Mb/s and 100 Mb/s. Copper hand-offs will be provided. The demarcation point can either be untagged and/or 802.1Q tagged trunk port.

For public Internet Services Westelcom will work with DANC and the NCTP member sites as follows:

- The NCTP member will provide Westelcom a request for an IP Address and an Internet Service VLAN at a rate between 1 Mb/s and 50 Mb/s.
- Westelcom will confirm with DANC the VLAN number allocation/assignment to the NCTP member for Internet Service.
- Westelcom will allocate an IP Address for the NCTP member/
- Westelcom will install and configure a layer 3 (L3) device at the DANC PoP in Syracuse, NY with the NCTP member VLAN/IP Address information and Internet rate for all participating NCTP members who are participating in the Westelcom Internet Service.
- Westelcom will employ Differentiated Services Code Point (DSCP), an industry-standard delineated QoS. The proposed technology and associated protocols shall permit NCTP participants to designate specific traffic streams within the aggregate NCTP network traffic as high priority and consequently receive preferential queuing. The capability will exist to exchange explicit QoS designations with external networks that may employ DSCP.

**c. Explanation of how and where the network will connect to a national backbone such as NLR or Internet2;**



DANC's network was designed as a regional transport service with the goal of providing access to multiple carriers and service providers. DANC's network is already interconnected with many international and regional internet providers as well as NYSERNET for I2 services.

Westelcom Communications Inc. has deployed a highly reliable Communications Network that expands throughout the 134 and 136 LATAs with core TDM and IP switching located in Plattsburgh, NY and Watertown, NY. The SONET network is diverse and has redundant connectivity to the PSTN, IXCs, Internet and Internet 2.

**d. Number of miles of fiber construction, and whether the fiber is buried or aerial;**

DANC's OATN currently serves many of the project locations listed in Table 2. For the majority of the remaining locations DANC will construct fiber optic distribution links from the existing OATN backbone network in St. Lawrence, Lewis and Jefferson Counties utilizing aerial as well as underground construction methods. To maximize value and reduce the implementation timeline, DANC will lease circuits from local Ethernet service providers for certain member locations. DANC is providing the FDRHPO a 10/100 Mbps Ethernet Fiber Service. FDRHPO is NOT purchasing, building or laying (buried or aerial) their own fiber and therefore we have no information on the number of miles of fiber provided by DANC in support of FDRHPO's overall 10/100 Mbps Ethernet Fiber service. We can say that DANC's Open Access Telecom Network (OATN), on which the FDRHPO services are provisioned, is a carrier-class telecommunications network serving Jefferson, Lewis, and St. Lawrence Counties in New York State, connecting the region to carrier collocation facilities in Syracuse, NY. The OATN is comprised of approximately 750 miles of fiber optic cable, and 14 Central Offices (CO's), which contain the electronic and optical equipment that power the network.

FDRHPO is NOT purchasing, building or laying their own fiber (buried or aerial) and therefore we have no information on the number of miles of fiber provided by Westelcom in support of FDRHPO's overall Internet Service.

Westelcom Communications, Inc. has deployed a highly reliable Communications Network that expands throughout the 134 and 136 LATAs with core TDM and IP switching located in Plattsburgh, NY and Watertown, NY. The SONET network is diverse and has redundant connectivity to the PSTN, IXCs, Internet and Internet 2. The network is integrated with the Independent Optical Network (ION), a statewide fiber network interconnecting with all telecommunications carriers. This network is used to deliver advanced telecommunications and high-speed data services to over 12,000 residential and 2000 business customers located throughout Clinton, Essex, Franklin, St. Lawrence, Jefferson and Lewis counties.

Westelcom will provide, maintain and manage a router for ingress/egress to the Internet as part of their managed public Internet Service offering to FDRHPO. The router will be located in the Development Authority of the North Country's (DANC) Syracuse PoP.

Westelcom Communications Inc. provides telecommunications services to mission critical customers that include the City of Watertown, STAT Communications, Jefferson Community College, Stream's Call Center, Claxton-Hepburn Medical Center, Alice Hyde Medical Center, Wyeth Research Laboratories and Samaritan Medical Center.

**e. Special systems or services for network management or maintenance (if applicable) and where such systems reside or are based.**

The leased service being provided to the FDRHPO customers listed in Table 2 includes network management and maintenance. The DANC network is monitored on a 24x7 basis via a variety of methods and systems. DANC's network monitoring operation utilizes several servers that monitor the elements of the network infrastructure. The status of each device is checked routinely and the Network Operation Staff is notified by several methods in the event

of a failure. FDRHPO customers (listed in Table 2) will be notified of an outage immediately after the problem has been identified. The notice will be given to the designated party as requested (i.e. telephone call, emails, etc.). Reporting information includes network availability, utilization and performance. This information will be provided to FDRHPO as requested.

DANC's Network Management System (NMS) uses a dual notification system to assure all alarms are captured and resolved rapidly. DANC has a comprehensive provisioning and monitoring system based on the following tools:

- Netguardian SNMP alarm collector: manages the SNMP and alarm closure information for environmental, power and physical security alarms.
- Preside Site Manager for the Optical Metro 3500: handles fault and configuration of the SONET and RPR aspects of the backbone.
- Ethernet Network Management System: handles overall discovery, topology and fault management, and monitoring of the different network layers in DANC's network from the backbone to the customer provided equipment (CPE).
- Ethernet Switch Manager: provisions and configures enterprise class data products including the backbone aggregation and CPE products.

In addition to monitoring the network equipment, the NMS also monitors environmental alarms at all CO locations to ensure that the equipment is secure and operating in a properly controlled environment.

Westelcom will use SolarWinds Network Monitoring software to monitor report and analyze individual NCTP Member site connections to the public Internet and the aggregate connection located at the DANC PoP. The SolarWinds Network Monitoring software includes the following tools:

- ipMonitor: discovers network devices; uses SNMP and Windows Management Instrumentation (WMI).
- NetFlow Traffic Analyzer: monitors traffic by capturing flow data from network devices; performs Class-Based Quality of Service (CBQoS) monitoring; flow-based reporting; NetFlow forensics; generates network traffic reports. This system will help Westelcom facilitate investigation of fault, performance and configuration issues, thereby improving the overall quality of the Internet Service being provided to the NCTP members.

**4. List of Connected Health Care Providers: Provide information below for all eligible and non-eligible health care provider sites that, as of the close of the most recent reporting period, are connected to the network and operational.**

**a. Health care provider site:** See Section 2, Tables 1 and 2.

**b. Eligible provider (Yes/No):** Yes. See Section 2, Tables 1 and 2.

**c. Type of network connection (e.g., fiber, copper, wireless):** All sites are receiving single-mode Corning SMF-28E fiber optic cable constructed as lateral cables from the existing DANC Open Access Telecom Network (OATN) ring backbone facility.

**d. How connection is provided (e.g., carrier-provided service; self-constructed; leased facility):** the connections are all carrier-provided leased service.

**e. Service and/or speed of connection (e.g., DS1, DS3, DSL, OC3, Metro Ethernet (10 Mbps):** All of the connections are either 10 Mbps or 100 Mbps. The actual connection speeds per location are as follows:

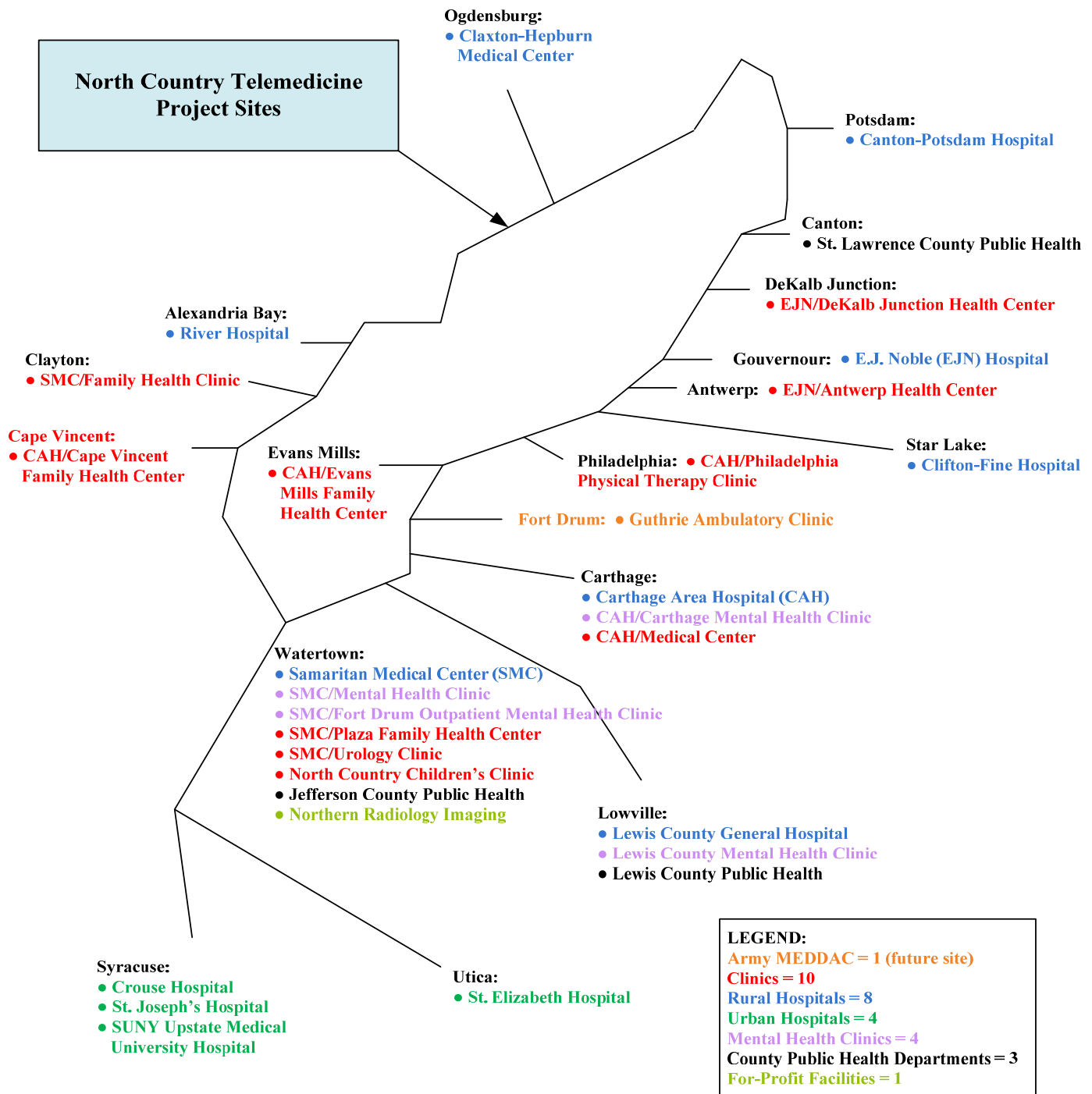
- Participating sites receiving 10 Mbps connections include:
  - Carthage Area Hospital/Cape Vincent Family Health Center
  - Carthage Area Hospital/Evans Mills Family Health Center
  - Carthage Area Hospital/Philadelphia Physical Therapy Clinic
  - Carthage Mental Health Clinic
  - Carthage Area Hospital/Medical Center
  - E. J. Noble Health Center/De Kalb Junction
  - E. J. Noble Health Center/Antwerp Health Center
  - Jefferson County Public Health Service/Watertown
  - Lewis County Community Mental Health Center/Lowville
  - North Country Children's Clinic/Watertown
  - Samaritan Medical Center Mental Health Clinic/Watertown
  - Samaritan Medical Center Clinic/Plaza Family Health Center/Evans Mills
  - Samaritan Medical Center Clinic/Fort Drum Outpatient Mental Health Clinic/Watertown
  - Samaritan Medical Center Clinic/Family Health Center/Clayton
  - Samaritan Medical Center Urology Clinic/Watertown
  - St. Lawrence County Public Health Department/Canton
  - Northern Radiology Imaging/Watertown
- Participating sites receiving 100 Mbps connections include:
  - Canton-Potsdam Hospital/Potsdam
  - Carthage Area Hospital/Carthage
  - Clifton-Fine Hospital/Star Lake
  - Crouse Hospital/Syracuse
  - E.J. Noble Hospital/Gouverneur
  - Lewis County General Hospital/Lowville
  - St. Elizabeth Medical Center/Utica
  - River Hospital/Alexandria Bay
  - Samaritan Medical Center/Watertown
  - St. Joseph's Hospital/Syracuse
  - SUNY Upstate Medical Center/Syracuse
  - Claxton-Hepburn Medical Center

**f. Gateway to NLR, Internet2, or the Public Internet (Yes/No):** (Yes) 500 Mbps Public Internet is provided by Westelcom Communications, Inc.

**g. Site Equipment (e.g., router, switch, SONET ADM, WDM), including manufacturer name and model number.** Termination equipment for the fiber connections are provided as part of the leased service. The equipment belongs to the service provider and is not owned or paid for by the NCTP site.

**h. Provide a logical diagram or map of the network.** Site locations are shown on the North Country Telemedicine Project (NCTP) Network Diagram. Each NCTP site is connected via fiber/Ethernet service provided by DANC. The actual connection speeds are listed Section 4e (above). Connectivity between the NCTP locations is provided via the carrier-based lease service provided to FDRHPO by DANC.

## North Country Telemedicine Project (NCTP) Network Diagram



5. Identify the following non-recurring and recurring costs, where applicable shown both as budgeted and actually incurred for the applicable quarter and funding year to-date.

a. Network Design

b. Network Equipment, including engineering and installation.

c. Infrastructure Deployment/Outside Plant

i. Engineering

ii. Construction

d. Internet2, NLR, or Public Internet Connection

e. Leased Facilities or Tariffed Services

f. Network Management, Maintenance, and Operation Costs (not captured elsewhere)

g. Other Non-Recurring and Recurring Costs

A detailed listing of non-recurring cost (NRC) for the applicable quarter and funding year-to-date is provided below in Tables 3 and 4. Table 3 contains the current data for FRN 37176 and Table 4 contains the current data for FRN 43316. All NRC have been invoiced for both projects.

Fort Drum Regional Health Planning Organization (FDRHPO)								
Non-Recurring Cost Breakdown for the 28 sites of the North Country Telemedicine Project (NCTP) # 17236								
FRN 37176								
Form 465 App Number	Name	Infrastructure-outside Plant Construction, Equip and install	Regional facilities, engineering and design	Network eng. const., mngt. and testing	Total Cost	Committed (85%)	Invoiced	Remaining
17236-01-0002	Canton-Potsdam Hospital	\$21,006.00	\$4,465.00	\$3,539.00	\$29,010.00	\$24,658.50	\$24,658.50	\$0.00
17236-01-0003	CAH/Medical Center	\$73,572.00	\$4,465.00	\$3,539.00	\$81,576.00	\$69,339.60	\$69,339.60	\$0.00
17236-01-0004	CAH/Cape Vincent Family Health Center	\$6,617.00	\$4,465.00	\$3,539.00	\$14,621.00	\$12,427.85	\$12,427.85	\$0.00
17236-01-0005	CAH/Evans Mills Family Health Center	\$7,724.00	\$4,465.00	\$3,539.00	\$15,728.00	\$13,368.80	\$13,368.80	\$0.00
17236-01-0006	CAH/Philadelphia Physical Therapy Clinic	\$6,617.00	\$4,465.00	\$3,539.00	\$14,621.00	\$12,427.85	\$12,427.85	\$0.00
17236-01-0007	CAH/Veterans Administration Clinic	\$6,617.00	\$4,465.00	\$3,539.00	\$14,621.00	\$12,427.85	\$12,427.85	\$0.00
17236-01-0008	Clifton-Fine Hospital	\$2,189.00	\$4,465.00	\$3,539.00	\$10,193.00	\$8,664.05	\$8,664.05	\$0.00
17236-01-0009	Crouse Hospital	\$1,082.00	\$4,465.00	\$3,539.00	\$9,086.00	\$7,723.10	\$7,723.10	\$0.00
17236-01-0010	E. J. Noble (EJN) Hospital	\$18,350.00	\$4,465.00	\$3,539.00	\$26,354.00	\$22,400.90	\$22,400.90	\$0.00
17236-01-0011	E. J. Noble (EJN) Health Center (Antwerp)	\$5,510.00	\$4,465.00	\$3,539.00	\$13,514.00	\$11,486.90	\$11,486.90	\$0.00
17236-01-0012	E. J. Noble (EJN) Health Center (Dekalb)	\$52,885.00	\$4,465.00	\$3,539.00	\$60,889.00	\$51,755.65	\$51,755.65	\$0.00
17236-01-0013	Jefferson County Public Health Service	\$11,708.00	\$4,465.00	\$3,539.00	\$19,712.00	\$16,755.20	\$16,755.20	\$0.00
17236-01-0014	Lewis County Community Mental Health Center	\$14,365.00	\$4,465.00	\$3,539.00	\$22,369.00	\$19,013.65	\$19,013.65	\$0.00
17236-01-0015	Lewis County General Hospital	\$39,823.00	\$4,465.00	\$3,539.00	\$47,827.00	\$40,652.95	\$40,652.95	\$0.00
17236-01-0016	St. Elizabeth Medical Center	\$1,082.00	\$4,465.00	\$3,539.00	\$9,086.00	\$7,723.10	\$7,723.10	\$0.00
17236-01-0017	North Country Children's Clinic	\$9,052.00	\$4,465.00	\$3,539.00	\$17,056.00	\$14,497.60	\$14,497.60	\$0.00
17236-01-0018	River Hospital	\$58,640.00	\$4,465.00	\$3,539.00	\$66,644.00	\$56,647.40	\$56,647.40	\$0.00
17236-01-0019	Samaritan Medical Center (SMC)	\$4,956.00	\$4,465.00	\$3,539.00	\$12,960.00	\$11,016.00	\$11,016.00	\$0.00
17236-01-0020	SMC Mental Health Clinic	\$22,494.00	\$4,465.00	\$3,539.00	\$30,498.00	\$25,923.30	\$25,923.30	\$0.00
17236-01-0021	SMC Clinic/Plaza Family Health Center	\$3,000.00	\$4,465.00	\$3,539.00	\$10,985.00	\$9,337.25	\$9,337.25	\$0.00
17236-01-0022	SMC Clinic/Fort Drum Outpatient Mental Health Clinic	\$7,724.00	\$4,465.00	\$3,539.00	\$15,728.00	\$13,368.80	\$13,368.80	\$0.00
17236-01-0023	SMC Clinic/Family Health Center	\$2,189.00	\$4,465.00	\$3,539.00	\$10,193.00	\$8,664.05	\$8,664.05	\$0.00
17236-01-0024	SMC Urology Clinic	\$9,052.00	\$4,465.00	\$3,539.00	\$17,056.00	\$14,497.60	\$14,497.60	\$0.00
17236-01-0025	St. Joseph's Hospital	\$1,082.00	\$4,465.00	\$3,539.00	\$9,086.00	\$7,723.10	\$7,723.10	\$0.00
17236-01-0026	St. Lawrence County Public Health Department	\$15,693.00	\$4,465.00	\$3,539.00	\$23,697.00	\$20,142.45	\$20,142.45	\$0.00
17236-01-0027	SUNY Upstate Medical University Hospital	\$1,082.00	\$4,465.00	\$3,539.00	\$9,086.00	\$7,723.10	\$7,723.10	\$0.00
17236-01-0028	CAH/Mental Health Clinic	\$3,000.00	\$4,465.00	\$3,531.00	\$10,986.00	\$9,338.10	\$9,338.10	\$0.00
17236-01-0029	Claxton-Hepburn Medical Center	\$2,189.00	\$4,465.00	\$3,539.00	\$10,193.00	\$8,664.05	\$8,664.05	\$0.00
<b>Total:</b>					<b>\$633,375.00</b>	<b>\$538,368.75</b>	<b>\$538,368.75</b>	<b>\$0.00</b>

Table 4

**Fort Drum Regional Health Planning Organization (FDRHPO)**  
**Non-Recurring Cost Breakdown for the 28 sites of the North Country Telemedicine Project (NCTP) # 17236**  
**FRN 43316**

Form 465 App Number	Name	Other - Equipment, installation, configuration and service	Total Cost	Committed (85%)	Invoiced	Remaining
17236-01-0002	Canton-Potsdam Hospital	\$291.57	\$291.57	<b>\$247.83</b>	\$247.83	\$0.00
17236-01-0003	CAH/Medical Center	\$294.56	\$294.56	<b>\$250.38</b>	\$250.38	\$0.00
17236-01-0004	CAH/Cape Vincent Family Health Center	\$289.00	\$289.00	<b>\$245.65</b>	\$245.65	\$0.00
17236-01-0005	CAH/Evans Mills Family Health Center	\$289.00	\$289.00	<b>\$245.65</b>	\$245.65	\$0.00
17236-01-0006	CAH/Philadelphia Physical Therapy Clinic	\$289.00	\$289.00	<b>\$245.65</b>	\$245.65	\$0.00
17236-01-0008	Clifton-Fine Hospital	\$293.31	\$293.31	<b>\$249.31</b>	\$249.31	\$0.00
17236-01-0009	Crouse Hospital	\$289.00	\$289.00	<b>\$245.65</b>	\$245.65	\$0.00
17236-01-0010	E. J. Noble (EJN) Hospital	\$293.31	\$293.31	<b>\$249.31</b>	\$249.31	\$0.00
17236-01-0011	E.J. Noble (EJN) Health Center (Antwerp)	\$289.00	\$289.00	<b>\$245.65</b>	\$245.65	\$0.00
17236-01-0012	E.J. Noble (EJN) Health Center (Dekalb)	\$289.00	\$289.00	<b>\$245.65</b>	\$245.65	\$0.00
17236-01-0013	Jefferson County Public Health Service	\$289.00	\$289.00	<b>\$245.65</b>	\$245.65	\$0.00
17236-01-0014	Lewis County Community Mental Health Center	\$289.00	\$289.00	<b>\$245.65</b>	\$245.65	\$0.00
17236-01-0015	Lewis County General Hospital	\$294.56	\$294.56	<b>\$250.38</b>	\$250.38	\$0.00
17236-01-0016	St. Elizabeth Medical Center	\$289.00	\$289.00	<b>\$245.65</b>	\$245.65	\$0.00
17236-01-0017	North Country Children's Clinic	\$289.00	\$289.00	<b>\$245.65</b>	\$245.65	\$0.00
17236-01-0018	River Hospital	\$294.56	\$294.56	<b>\$250.38</b>	\$250.38	\$0.00
17236-01-0019	Samaritan Medical Center (SMC)	\$294.56	\$294.56	<b>\$250.38</b>	\$250.38	\$0.00
17236-01-0020	SMC Mental Health Clinic	\$289.00	\$289.00	<b>\$245.65</b>	\$245.65	\$0.00
17236-01-0022	SMC Clinic/Fort Drum Outpatient Mental Health Clinic	\$289.00	\$289.00	<b>\$245.65</b>	\$245.65	\$0.00
17236-01-0023	SMC Clinic/Family Health Center	\$289.00	\$289.00	<b>\$245.65</b>	\$245.65	\$0.00
17236-01-0024	SMC Urology Clinic	\$289.00	\$289.00	<b>\$245.65</b>	\$245.65	\$0.00
17236-01-0025	St. Joseph's Hospital	\$289.00	\$289.00	<b>\$245.65</b>	\$245.65	\$0.00
17236-01-0026	St. Lawrence County Public Health Department	\$289.00	\$289.00	<b>\$245.65</b>	\$245.65	\$0.00
17236-01-0027	SUNY Upstate Medical University Hospital	\$289.00	\$289.00	<b>\$245.65</b>	\$245.65	\$0.00
17236-01-0028	CAH/Mental Health Clinic	\$289.00	\$289.00	<b>\$245.65</b>	\$245.65	\$0.00
17236-01-0029	Claxton-Hepburn Medical Center	\$291.57	\$291.57	<b>\$247.83</b>	\$247.83	\$0.00
<b>Total:</b>			<b>\$7,550.00</b>	<b>\$6,417.50</b>	<b>\$6,417.50</b>	<b>\$0.00</b>

A detailed listing of recurring cost (RC) for the applicable quarter and funding year-to-date is provided in Tables 5, 6 and 7. Table 5 (Years 1 & 2), Table 6 (Years 3 & 4) contain the current data for FRN 37176 and Table 7 (Years 1 through 4) contains the current data for FRN 43316.

<b>Fort Drum Regional Health Planning Organization (FDRHPO)</b> <b>Recurring Cost Breakdown for the 28 sites of the North Country Telemedicine Project (NCTP) # 17236 (Years 1 &amp; 2)</b> <b>FRN 37176</b>								
Form 465 App Number	Name	Leased/Tariffed facilities/services (Years 1 & 2)	Number of Items Committed	Number of Items Invoiced	Total Cost	Committed (85%)	Invoiced	Remaining
17236-01-0002	Canton-Potsdam Hospital	\$2,100.00	24	11	\$50,400.00	\$42,840.00	\$19,635.00	\$23,205.00
17236-01-0003	CAH/Medical Center	\$2,100.00	24	11	\$50,400.00	\$42,840.00	\$19,635.00	\$23,205.00
17236-01-0004	CAH/Cape Vincent Family Health Center	\$1,000.00	24	11	\$24,000.00	\$20,400.00	\$9,350.00	\$11,050.00
17236-01-0005	CAH/Evans Mills Family Health Center	\$1,000.00	24	11	\$24,000.00	\$20,400.00	\$9,350.00	\$11,050.00
17236-01-0006	CAH/Philadelphia Physical Therapy Clinic	\$1,000.00	24	11	\$24,000.00	\$20,400.00	\$9,350.00	\$11,050.00
17236-01-0008	Clifton-Fine Hospital	\$2,100.00	24	11	\$50,400.00	\$42,840.00	\$19,635.00	\$23,205.00
17236-01-0009	Crouse Hospital	\$2,100.00	24	11	\$50,400.00	\$42,840.00	\$19,635.00	\$23,205.00
17236-01-0010	E. J. Noble (EJN) Hospital	\$2,100.00	24	11	\$50,400.00	\$42,840.00	\$19,635.00	\$23,205.00
17236-01-0011	E.J. Noble (EJN) Health Center (Antwerp)	\$1,000.00	24	11	\$24,000.00	\$20,400.00	\$9,350.00	\$11,050.00
17236-01-0012	E.J. Noble (EJN) Health Center (DeKalb)	\$1,000.00	24	11	\$24,000.00	\$20,400.00	\$9,350.00	\$11,050.00
17236-01-0013	Jefferson County Public Health Service	\$1,000.00	24	11	\$24,000.00	\$20,400.00	\$9,350.00	\$11,050.00
17236-01-0014	Lewis County Community Mental Health Center	\$1,000.00	24	11	\$24,000.00	\$20,400.00	\$9,350.00	\$11,050.00
17236-01-0015	Lewis County General Hospital	\$2,100.00	24	11	\$50,400.00	\$42,840.00	\$19,635.00	\$23,205.00
17236-01-0016	St. Elizabeth Medical Center	\$3,000.00	24	11	\$72,000.00	\$61,200.00	\$28,050.00	\$33,150.00
17236-01-0017	North Country Children's Clinic	\$1,000.00	24	11	\$24,000.00	\$20,400.00	\$9,350.00	\$11,050.00
17236-01-0018	River Hospital	\$2,100.00	24	11	\$50,400.00	\$42,840.00	\$19,635.00	\$23,205.00
17236-01-0019	Samaritan Medical Center (SMC)	\$2,100.00	24	11	\$50,400.00	\$42,840.00	\$19,635.00	\$23,205.00
17236-01-0020	SMC Mental Health Clinic	\$1,000.00	24	11	\$24,000.00	\$20,400.00	\$9,350.00	\$11,050.00
17236-01-0021	SMC Clinic/Plaza Family Health Center	\$1,000.00	24	11	\$24,000.00	\$20,400.00	\$9,350.00	\$11,050.00
17236-01-0022	SMC Clinic/Fort Drum Outpatient Mental Health Clinic	\$1,000.00	24	11	\$24,000.00	\$20,400.00	\$9,350.00	\$11,050.00
17236-01-0023	SMC Clinic/Family Health Center	\$1,000.00	24	11	\$24,000.00	\$20,400.00	\$9,350.00	\$11,050.00
17236-01-0024	SMC Urology Clinic	\$1,000.00	24	11	\$24,000.00	\$20,400.00	\$9,350.00	\$11,050.00
17236-01-0025	St. Joseph's Hospital	\$2,100.00	24	11	\$50,400.00	\$42,840.00	\$19,635.00	\$23,205.00
17236-01-0026	St. Lawrence County Public Health Department	\$1,000.00	24	11	\$24,000.00	\$20,400.00	\$9,350.00	\$11,050.00
17236-01-0027	SUNY Upstate Medical University Hospital	\$2,100.00	24	11	\$50,400.00	\$42,840.00	\$19,635.00	\$23,205.00
17236-01-0028	CAH/Mental Health Clinic	\$2,000.00	24	11	\$48,000.00	\$40,800.00	\$18,700.00	\$22,100.00
17236-01-0029	Claxton-Hepburn Medical Center	\$2,100.00	24	11	\$50,400.00	\$42,840.00	\$19,635.00	\$23,205.00
<b>Total:</b>					<b>\$1,010,400.00</b>	<b>\$858,840.00</b>	<b>\$393,635.00</b>	<b>\$465,205.00</b>

<b>Fort Drum Regional Health Planning Organization (FDRHPO)</b> <b>Recurring Cost Breakdown for the 28 sites of the North Country Telemedicine Project (NCTP) # 17236 (Years 3 &amp; 4)</b> <b>FRN 37176</b>								
Form 465 App Number	Name	Leased/Tariffed facilities/services (Years 1 & 2)	Number of Items Committed	Number of Items Invoiced	Total Cost	Committed (85%)	Invoiced	Remaining
17236-01-0002	Canton-Potsdam Hospital	\$200.00	24	0	\$4,800.00	\$4,080.00	\$0.00	\$4,080.00
17236-01-0003	CAH/Medical Center	\$200.00	24	0	\$4,800.00	\$4,080.00	\$0.00	\$4,080.00
17236-01-0004	CAH/Cape Vincent Family Health Center	\$100.00	24	0	\$2,400.00	\$2,040.00	\$0.00	\$2,040.00
17236-01-0005	CAH/Evans Mills Family Health Center	\$100.00	24	0	\$2,400.00	\$2,040.00	\$0.00	\$2,040.00
17236-01-0006	CAH/Philadelphia Physical Therapy Clinic	\$100.00	24	0	\$2,400.00	\$2,040.00	\$0.00	\$2,040.00
17236-01-0008	Clifton-Fine Hospital	\$200.00	24	0	\$4,800.00	\$4,080.00	\$0.00	\$4,080.00
17236-01-0009	Crouse Hospital	\$200.00	24	0	\$4,800.00	\$4,080.00	\$0.00	\$4,080.00
17236-01-0010	E. J. Noble (EJN) Hospital	\$200.00	24	0	\$4,800.00	\$4,080.00	\$0.00	\$4,080.00
17236-01-0011	E.J. Noble (EJN) Health Center (Antwerp)	\$100.00	24	0	\$2,400.00	\$2,040.00	\$0.00	\$2,040.00
17236-01-0012	E.J. Noble (EJN) Health Center (DeKalb)	\$100.00	24	0	\$2,400.00	\$2,040.00	\$0.00	\$2,040.00
17236-01-0013	Jefferson County Public Health Service	\$100.00	24	0	\$2,400.00	\$2,040.00	\$0.00	\$2,040.00
17236-01-0014	Lewis County Community Mental Health Center	\$100.00	24	0	\$2,400.00	\$2,040.00	\$0.00	\$2,040.00
17236-01-0015	Lewis County General Hospital	\$200.00	24	0	\$4,800.00	\$4,080.00	\$0.00	\$4,080.00
17236-01-0016	St. Elizabeth Medical Center	\$3,000.00	24	0	\$72,000.00	\$61,200.00	\$0.00	\$61,200.00
17236-01-0017	North Country Children's Clinic	\$100.00	24	0	\$2,400.00	\$2,040.00	\$0.00	\$2,040.00
17236-01-0018	River Hospital	\$200.00	24	0	\$4,800.00	\$4,080.00	\$0.00	\$4,080.00
17236-01-0019	Samaritan Medical Center (SMC)	\$200.00	24	0	\$4,800.00	\$4,080.00	\$0.00	\$4,080.00
17236-01-0020	SMC Mental Health Clinic	\$100.00	24	0	\$2,400.00	\$2,040.00	\$0.00	\$2,040.00
17236-01-0021	SMC Clinic/Plaza Family Health Center	\$100.00	24	0	\$2,400.00	\$2,040.00	\$0.00	\$2,040.00
17236-01-0022	SMC Clinic/Fort Drum Outpatient Mental Health Clinic	\$100.00	24	0	\$2,400.00	\$2,040.00	\$0.00	\$2,040.00
17236-01-0023	SMC Clinic/Family Health Center	\$100.00	24	0	\$2,400.00	\$2,040.00	\$0.00	\$2,040.00
17236-01-0024	SMC Urology Clinic	\$100.00	24	0	\$2,400.00	\$2,040.00	\$0.00	\$2,040.00
17236-01-0025	St. Joseph's Hospital	\$200.00	24	0	\$4,800.00	\$4,080.00	\$0.00	\$4,080.00
17236-01-0026	St. Lawrence County Public Health Department	\$100.00	24	0	\$2,400.00	\$2,040.00	\$0.00	\$2,040.00
17236-01-0027	SUNY Upstate Medical University Hospital	\$200.00	24	0	\$4,800.00	\$4,080.00	\$0.00	\$4,080.00
17236-01-0028	CAH/Mental Health Clinic	\$200.00	24	0	\$4,800.00	\$4,080.00	\$0.00	\$4,080.00
17236-01-0029	Claxton-Hepburn Medical Center	\$200.00	24	0	\$4,800.00	\$4,080.00	\$0.00	\$4,080.00
<b>Total:</b>					<b>\$163,200.00</b>	<b>\$138,720.00</b>	<b>\$0.00</b>	<b>\$138,720.00</b>



Table 7

**Fort Drum Regional Health Planning Organization (FDRHPO)**  
**Recurring Cost Breakdown for the 28 sites of the North Country Telemedicine Project (NCTP) # 17236 (Years 1-4)**  
**FRN 43316**

Form 465 App Number	Name	Leased/Tariffed facilities/services	Number of Items Committed	Number of Items Invoiced	Total Cost	Committed (85%)	Invoiced	Remaining
17236-01-0002	Canton-Potsdam Hospital	\$420.00	48	11	\$20,160.00	\$17,136.00	\$3,927.00	\$13,209.00
17236-01-0003	CAH/Medical Center	\$1,050.00	48	11	\$50,400.00	\$42,840.00	\$9,817.50	\$33,022.50
17236-01-0004	CAH/Cape Vincent Family Health Center	\$210.00	48	11	\$10,080.00	\$8,568.00	\$1,963.50	\$6,604.50
17236-01-0005	CAH/Evans Mills Family Health Center	\$210.00	48	11	\$10,080.00	\$8,568.00	\$1,963.50	\$6,604.50
17236-01-0006	CAH/Philadelphia Physical Therapy Clinic	\$210.00	48	11	\$10,080.00	\$8,568.00	\$1,963.50	\$6,604.50
17236-01-0008	Clifton-Fine Hospital	\$840.00	48	11	\$40,320.00	\$34,272.00	\$7,854.00	\$26,418.00
17236-01-0009	Crouse Hospital	\$210.00	48	11	\$10,080.00	\$8,568.00	\$1,963.50	\$6,604.50
17236-01-0010	E. J. Noble (EJN) Hospital	\$840.00	48	11	\$40,320.00	\$34,272.00	\$7,854.00	\$26,418.00
17236-01-0011	E.J. Noble (EJN) Health Center (Antwerp)	\$210.00	48	11	\$10,080.00	\$8,568.00	\$1,963.50	\$6,604.50
17236-01-0012	E.J. Noble (EJN) Health Center (DeKalb)	\$210.00	48	11	\$10,080.00	\$8,568.00	\$1,963.50	\$6,604.50
17236-01-0013	Jefferson County Public Health Service	\$210.00	48	11	\$10,080.00	\$8,568.00	\$1,963.50	\$6,604.50
17236-01-0014	Lewis County Community Mental Health Center	\$210.00	48	11	\$10,080.00	\$8,568.00	\$1,963.50	\$6,604.50
17236-01-0015	Lewis County General Hospital	\$1,050.00	48	11	\$50,400.00	\$42,840.00	\$9,817.50	\$33,022.50
17236-01-0016	St. Elizabeth Medical Center	\$210.00	48	11	\$10,080.00	\$8,568.00	\$1,963.50	\$6,604.50
17236-01-0017	North Country Children's Clinic	\$210.00	48	11	\$10,080.00	\$8,568.00	\$1,963.50	\$6,604.50
17236-01-0018	River Hospital	\$1,050.00	48	11	\$50,400.00	\$42,840.00	\$9,817.50	\$33,022.50
17236-01-0019	Samaritan Medical Center (SMC)	\$1,050.00	48	11	\$50,400.00	\$42,840.00	\$9,817.50	\$33,022.50
17236-01-0020	SMC Mental Health Clinic	\$210.00	48	11	\$10,080.00	\$8,568.00	\$1,963.50	\$6,604.50
17236-01-0022	SMC Clinic/Fort Drum Outpatient Mental Health Clinic	\$210.00	48	11	\$10,080.00	\$8,568.00	\$1,963.50	\$6,604.50
17236-01-0023	SMC Clinic/Family Health Center	\$210.00	48	11	\$10,080.00	\$8,568.00	\$1,963.50	\$6,604.50
17236-01-0024	SMC Urology Clinic	\$210.00	48	11	\$10,080.00	\$8,568.00	\$1,963.50	\$6,604.50
17236-01-0025	St. Joseph's Hospital	\$210.00	48	11	\$10,080.00	\$8,568.00	\$1,963.50	\$6,604.50
17236-01-0026	St. Lawrence County Public Health Department	\$210.00	48	11	\$10,080.00	\$8,568.00	\$1,963.50	\$6,604.50
17236-01-0027	SUNY Upstate Medical University Hospital	\$210.00	48	11	\$10,080.00	\$8,568.00	\$1,963.50	\$6,604.50
17236-01-0028	CAH/Mental Health Clinic	\$210.00	48	11	\$10,080.00	\$8,568.00	\$1,963.50	\$6,604.50
17236-01-0029	Claxton-Hepburn Medical Center	\$420.00	48	11	\$20,160.00	\$17,136.00	\$3,927.00	\$13,209.00
<b>Total:</b>					<b>\$504,000.00</b>	<b>\$428,400.00</b>	<b>\$98,175.00</b>	<b>\$330,225.00</b>

## 6. Describe how costs have been apportioned and the sources of the funds to pay them:

### a. Explain how costs are identified, allocated among, and apportioned to both eligible and ineligible network participants.

- Any ineligible entity that chooses to connect to the NCTP network will pay 100% of all costs (NRC and MRC) associated with obtaining a network connection from the NCTP service provider (DANC).
- Network connection rates will be established upon award of the telecommunications network contract.
- Eligible participants will pay 15% of the network service delivery costs for each site connection, based on the amount of bandwidth they choose to purchase.
- It is currently estimated that a 10 Mbps network connection will cost approximately \$1,000 per month. Of this amount, a site receiving a 10 Mbps connection would pay 15% of this amount, or \$100.00 per month.
- It is currently estimated that a 100 Mbps network connection will cost approximately \$2,100 per month. Of this amount, a site receiving a 100 Mbps connection would pay 15% of this amount, or \$315.00 per month.
- Public Internet connections speeds and costs vary by NCTP site. The total amount of public Internet bandwidth available to the NCTP network is 500M. The total amount of bandwidth available to each NCTP member site was based on the following criteria:
  - Distance from Fort Drum.
  - Size of the NCTP location.
- Public Internet connection speeds and costs varied as follows:
  - 10 Mbps connections would cost \$210.00 per month. Of this amount the NCTP member would be responsible for paying 15% or \$31.50 per month.
  - 20 Mbps connections would cost \$420.00 per month. Of this amount the NCTP member would be responsible for paying 15% or \$63.00 per month.
  - 40 Mbps connections would cost \$840.00 per month. Of this amount the NCTP member would be responsible for paying 15% or \$126.00 per month.
  - 50 Mbps connections would cost \$1,050.00 per month. Of this amount the NCTP member would be responsible for paying 15% or \$157.50 per month.



**b. Describe the source of funds from:**

**i. Eligible Pilot Program network participants**

- NCTP network participants will pay 15% of network service delivery costs.

**ii. Ineligible Pilot Program network participants**

- Ineligible entities that choose to connect to the NCTP network will pay 100% of all costs (NRC and MRC) associated with obtaining a network connection from the NCTP service provider (DANC). Northern Radiology Imaging (NRI) connected to the network during the 12<sup>th</sup> Quarter. NRI paid 100% of all NRC and will pay 100% of all MRC for the duration of the service agreement.

**c. Show contributions from all other sources (e.g., local, state, and federal sources, and other grants).**

**i. Identify source of financial support and anticipated revenues that is paying for costs not covered by the fund and by Pilot Program participants.**

- FDRHPO has received a federal appropriation that will pay for the 15% non-recurring construction costs. *The Federal Appropriation Number that covers those funds is APPN 97 9 0130.88.*

**ii. Identify the respective amounts and remaining time for such assistance.**

- The federal appropriation for the 15% NRC funding was spent during the construction phase of the North Country Telemedicine Project network. All construction was completed prior to 1 April 2010.

**d. Explain how the selected participant's minimum 15 percent contribution is helping to achieve both the selected participant's identified goals and objectives and the overarching goals of the Pilot Program.**

- The willingness of network participants to pay their minimum 15% contribution of network service delivery costs demonstrates their commitment to identified goals and objectives and the overarching goals of the Pilot Program.

**7. Identify any technical or non-technical requirements or procedures necessary for ineligible entities to connect to the participant's network.**

- Ineligible entities will connect to the NCTP network in the same manner as all of the eligible entities. The only difference will be in how billing is handled. Ineligible entities will be responsible for paying 100% of all NRC and MRC for the duration of the service agreement.

**8. Provide an update on the project management plan, detailing:**

**a. The project's current leadership and management structure and any changes to the management structure since the last data report;**

- Denise Young, Executive Director of the FDRHPO, is the Project Coordinator (PC) for the NCTP.

- The FDRHPO will oversee the NCTP through a full-time Telemedicine Coordinator. Robert P. Hunt has been appointed as the NCTP Regional Telemedicine Program Manager for the FDRHPO and will serve as the Associate Project Coordinator (ACP)/Telemedicine Coordinator.
- In addition to the Coordinator, the project team will be supported by clinical, technical, and management/administrative committees representing the participating North Country hospitals, urban hospitals, and rural clinics. Once a network vendor is selected, representatives from the vendor and other project support organizations (e.g., NYSErNet, payer representatives, etc.) may be included in various committee activities.

Each of these committees will discuss and advise the network and telemedicine activities that pertain to their area of expertise.

**b. In the first quarterly report, the selected applicant should provide a detailed project plan and schedule.**

- The following table includes the significant milestones that will occur during the grant period. These projected milestones start within 60 days after the date of receipt of the Funding Commitment Letter (FCL) and will be managed by the FDRHPO. The FCL was received in August 2009.

Task Number	Activity	Timeframe
<b>Task 1</b>	Network construction	Months 1 - 6
<b>Task 2</b>	Meeting with the tertiary site providers to educate on telemedicine and refine business associate agreements	Months 2 - 6
<b>Task 3</b>	Identification of site representatives—for clinical services and IT issues	Months 4 - 6
<b>Task 4</b>	Roll out of the committees representing the North Country facilities, the tertiary facilities, and Selected Telecommunications Vendor	Months 4 - 7
<b>Task 5</b>	Telemedicine equipment vendor selection and purchase of telemedicine equipment	Months 6 - 9
<b>Task 6</b>	Protocol development for consult rule-in/rule out, consultation imitation and follow-up process, information exchange and security, etc.	Months 6 - 36
<b>Task 7</b>	Initial engagement of commercial payers for demonstration and possible reimbursement	Months 6 - 36
<b>Task 8</b>	Testing the network	Months 7 - 15
<b>Task 9</b>	Training and piloting network access, and use of the equipment	Months 10 - 16
<b>Task 10</b>	Roll out of initial clinical specialties: cardiology, gastroenterology,	Months 24 - 48

	oncology, pulmonology and outpatient behavioral health (one per month)	
<b>Task 11</b>	<b>Evaluation</b>	<b>Months 36 - 48</b>

**The schedule must provide a list of key project deliverables or tasks, and their anticipated completion dates.**

- Participating sites receiving 10 Mbps connections include:
  - Carthage Area Hospital/Cape Vincent Family Health Center
  - Carthage Area Hospital/Evans Mills Family Health Center
  - Carthage Area Hospital/Philadelphia Physical Therapy Clinic
  - Carthage Mental Health Clinic
  - Carthage Area Hospital/Medical Center
  - E. J. Noble Health Center/De Kalb Junction
  - E. J. Noble Health Center/Antwerp Health Center
  - Jefferson County Public Health Service/Watertown
  - Lewis County Community Mental Health Center/Lowville
  - North Country Children's Clinic/Watertown
  - Samaritan Medical Center Mental Health Clinic/Watertown
  - Samaritan Medical Center Clinic/Plaza Family Health Center/Evans Mills
  - Samaritan Medical Center Clinic/Fort Drum Outpatient Mental Health Clinic/Watertown
  - Samaritan Medical Center Clinic/Family Health Center/Clayton
  - Samaritan Medical Center Urology Clinic/Watertown
  - St. Lawrence County Public Health Department/Canton
- Participating sites receiving 100 Mbps connections include:
  - Canton-Potsdam Hospital/Potsdam
  - Carthage Area Hospital/Carthage
  - Clifton-Fine Hospital/Star Lake
  - Crouse Hospital/Syracuse
  - E.J. Noble Hospital/Gouverneur
  - Lewis County General Hospital/Lowville
  - St. Elizabeth Medical Center/Utica
  - River Hospital/Alexandria Bay
  - Samaritan Medical Center/Watertown
  - St. Joseph's Hospital/Syracuse
  - SUNY Upstate Medical Center/Syracuse
  - Claxton-Hepburn Medical Center
- All participating sites were connected to the NCTP network on April 1<sup>st</sup>, 2010. All of the participating sites were operational on the same date, 1 April 2010.

**Among the deliverables, participants must indicate the dates when each health care provider site is expected to be connected to the network and operational.**

- All participating sites were connected to the NCTP network on April 1<sup>st</sup>, 2010. All of the participating sites were operational on the same date, 1 April 2010.

**Subsequent quarterly reports should identify which project deliverables, scheduled for the previous quarter, were met, and which were not met.**

Tasks 6 and 7 have been extended to 24 months to allow time to properly develop the complex protocols and business relationships required to implement them. Tasks 10 and 11 have been extended to reflect the changes to Tasks 6 and 7. Refer to the table in paragraph 8b (above) for a description of the tasks below:

**Task 1 (Months 1 – 6):** FDRHPO received their FCL in August 2009. The chosen ISP, Development Authority of the North Country (DANC) started terminating the first NCTP locations in October of 2009. Although it was hoped that all construction could be completed by December 2009, seasonal weather and permit issues with National Grid Energy Services have pushed the timeframe out to February 2010. The timeframe of 4 months was very aggressive and due to the late seasonal start, could not realistically be completed in less than 6 months. All participating sites were connected to the NCTP network on April 1<sup>st</sup>, 2010. All of the participating sites were operational on the same date, 1 April 2010.

**Task 2 (Months 2 – 6):** FDRHPO has begun monthly meetings with the CIO's and technical support staff of all NCTP locations to discuss telemedicine applications and their impact on the network.

- FDRHPO is in the process of delivering a Telemedicine Education seminar with regional physicians, primary care clinics and hospital CEOs/CIOs.
- FDRHPO has created a Telemedicine Workgroup that will meet monthly. The group is tasked with:
  - Obtaining institutional buy-in
  - Developing funds for initial financing of telemedicine applications
  - Researching reimbursement and other issues to sustainability
  - Identifying issues with Telemedicine that are specific to NYS

**Task 3 (Months 4 – 6):** The North Country Telemedicine Project (NCTP) network is unique in that most of the entities using the network are not directly affiliated with one another. Primary care facilities, mental health facilities and specialty care facilities are affiliated with particular hospitals. The hospitals themselves are not affiliated with the other hospitals that are part of the NCTP network.

FDRHPO is responsible for interfacing between the NCTP entities and the service providers. The Development Authority of the North Country (DANC) provides the fiber/Ethernet connections and Westelcom Communications, Inc. provides the public Internet connection. To this end, FDRHPO hired a Regional Telemedicine Project Manager (RTPM) to interface with the service providers on behalf of the NCTP entities.

The RTPM is also responsible for interfacing with the IT Manager at each of the NCTP entities. The IT Managers of the NCTP hospitals are responsible for providing IT support to the primary care facilities, mental health facilities and specialty care facilities that are affiliated with that particular hospital. The RTPM has identified the IT Managers for each of the NCTP hospitals and is in contact with them as needed.

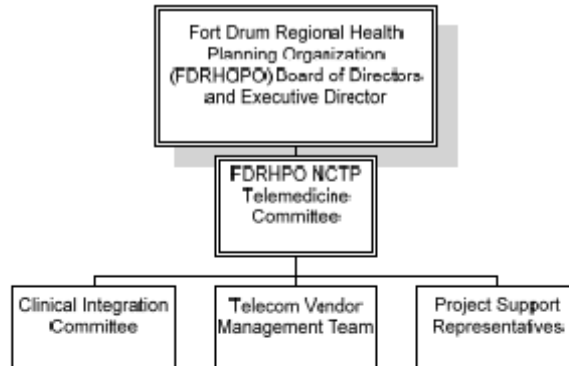
The RTPM met with the service providers on a weekly basis during the construction and initial turn-up of the network. The NCTP network became operational on 1 April 2010. Going forward, meetings with the services providers will be held on a monthly basis for the first 6 months from that date of network turn-up (1 April 2010). The service providers are responsible for updating the RTPM with weekly updates concerning the on-going operational status of the NCTP network. The RTPM then updates the IT Managers of the NCTP hospitals regarding any NCTP network issues that directly or indirectly affect them and/or their affiliates.

Identification of personal to manage clinical services is still being worked on.

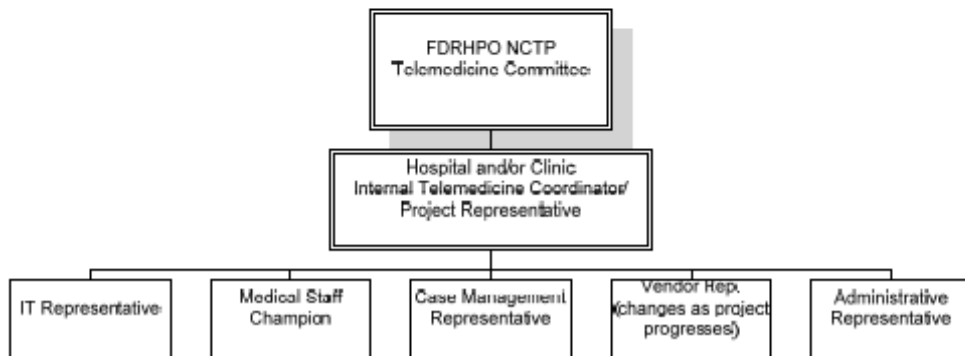
**Task 4 (Months 4-7):** FDRHPO has begun rolling out committees in support of the NCTP network, Continuing Medical Education (CME) training and Telemedicine Applications.

These committees are staffed by the FDRHPO and members from the various regional hospitals, primary care facilities, mental health facilities and specialty care facilities. The following committees are now operational:

1. Technology Committee: Meets on a quarterly basis. Committee members consist of IT Managers and technicians from the NCTP sites, network engineers from the service providers as well as the RTPM, the FDRHPO Executive Director and an FDRHPO Board Member:



FDRHPO NCTP Partner Internal Organization for Telemedicine Project



Committee members discuss issues related to the operation/maintenance of the NCTP network which include the following topics:

- a. Firewall configuration rules
  - b. IPsec VPN configurations
  - c. VLAN WAN assignment
  - d. IP-based VTC configurations
  - e. IPv4 to IPv6 migration
  - f. Technical training (CCNA, CLI, Routers, Switches, Firewalls, VPNs)
  - g. QoS for Telemedicine Applications
2. Continuing Medical Education (CME) Committee: Meets on a monthly basis. CME Committee members consist of the following personnel:
    - a. Jefferson Community College, Dean for Continuing Education

- b. Samaritan Medical Center (SMC), Medical Education Director
- c. SMC, Director of Rehabilitation Services
- d. SMC, Manager of Rehabilitation Services
- e. SMC, Manager of Cardiopulmonary Services
- f. SMC, Nuclear Medicine Supervisor
- g. SMC, Manager of Recruitment
- h. FDRHPO, Regional Telemedicine Project Manager

The CME Committee members report back to the Technology Committee on a quarterly basis. CME Committee members discuss issues related to enhancing CME training by utilizing the NCTP network to deliver content to physicians, nurses and technicians.

**Task 5 (Months 6 - 7):** FDRHPO, in conjunction with various NCTP member sites, has begun to evaluate, purchase, install and operate equipment in support of Telemedicine applications. The first Telemedicine application that has been brought on-line is in support of Telepsychiatry.

- 1. Participants:
  - a. North Country Children's Clinic (NCCC) (FRN37176, 17236-01-0017)
  - b. State University of New York (SUNY)/Upstate Medical Center (UMC) (FRN37176, 17236-01-0027)
  - c. New York State (NYS) Office of Mental Health (OMH)
- 2. Equipment Vendors:
  - a. SUNY/UMC: Polycom VSX 7000 Video Teleconference (VTC) System
  - b. NCCC: Tandberg Edge 75 HD Video Teleconference (VTC) System

NYS OMH has authorized NCCC to participate in the New York Child and Adolescent Telepsychiatry (NYCAT) program. **About NYCAT:**

According to the Surgeon General, about 20% of children are estimated to have a mental disorder, with 5-9% of children having severe functional impairment or serious emotional disturbances. Of the total number of children and adolescents suffering at least mild functional impairment, fewer than 1 in 5 receive treatment. While it is estimated that approximately 33,000 child and adolescent psychiatrists are needed to adequately treat children in the U.S., there are only 7,000 child and adolescent psychiatrists in the U.S. today.

In recognition of this growing need, OMH's Division of Child and Family Services has established the New York Child and Adolescent Telepsychiatry (NYCAT) program. This initiative is currently funded to address child psychiatric consultation needs in areas with health care shortages. OMH has contracted with Columbia University's Division of Child and Adolescent Psychiatry and The Professional Practice Group (PPG) of the Department of Psychiatry at the SUNY Upstate Medical University to deliver psychiatric consultations. Columbia University will cover New York City, Long Island, and the Hudson River Regions. The Upstate Medical University PPG will cover the Western and Central Regions. NYCAT is a key component of the New York State Office of Mental Health's goal to increase access to appropriate and effective services.

Patients can attend teleconference sessions at the North Country Children's Clinic with experts at Upstate Medical University, Syracuse. The Telepsychiatry facility is at the children's clinic, but is available to other community health care providers in the area. The facility means less travel and less separation for families. A teleconference appointment is not much different from online video chatting. Patients sit in a room that houses a large monitor. A camera, controlled by both parties, sits on top and can swivel and zoom. The therapist zooms in to see facial expressions and zooms out to

see family reactions. The patient's microphone can be turned on only by the patient to ensure private moments remain private.

The NCCC and SUNY/UMC are connected to the North Country Telemedicine Program (NCTP) fiber/Ethernet network. Each NCTP location is connected to the NCTP network via layer-2 fiber/Ethernet switches provided and maintained by the ISP (Development Authority of the North Country – DANC). Each NCTP locations layer-2 switch is connected to a hardware based firewall. Behind each NCTP locations hardware firewall is their local area network (LAN). Both locations have varying amounts of hardware in their respective LANs (routers, switches, hubs, servers, desktops, laptops, printers, wireless access points and other miscellaneous equipment) and the VTC equipment is just one additional piece of hardware that is connected to an Ethernet switch port at each location. The connection from the NCCC Tandberg Edge 75 VTC to the SUNY/UMC VSX 7000 VTC is an H.323 IP-based 768kbps/Advanced Encryption Standard (AES) call. SUNY/UMC is in the process of replacing their Polycom VTC equipment with VTC equipment from Tandberg. Based on that knowledge FDRHPO recommended that NCCC purchase equipment from Tandberg instead of Polycom.

**Task 6 (Months 6 – 36):** Not Applicable at this time. This task has been extended to 24 months to allow FDRHPO to fully develop the protocols required to implement the Telemedicine applications tied to this task.

**Task 7 (Months 6 – 36):** Not Applicable at this time. This task has been extended to 24 months to allow FDRHPO to fully develop the business relationships/partnerships required to successfully engage the appropriate businesses (insurance companies) that would allow us to create Telemedicine applications that will provide HCPs with appropriate levels of reimbursement.

**Task 8 (Months 7 – 15):** FDRHPO, working in conjunction with the service providers DANC and Westelcom, has begun testing the fiber/Ethernet intranet connections between NCTP member sites as well as the Internet connection from the NCTP member site to the public Internet.

Currently, the NCTP network has two types of fiber/Ethernet connections. Hospitals have 100 Mbps connections and all other locations (clinics and public health facilities) have 10 Mbps connections. Testing will take place in six (6) phases:

1. Testing of NCTP fiber/Ethernet intranet.
2. Testing of NCTP public Internet connection.
3. Baseline NCTP intranet.
4. Baseline NCTP public Internet connection.
5. Testing of Hospital Video Teleconferencing (VTC) Systems.
6. Testing of Telemedicine Applications.

Phase 1: NCTP member sites have been working with the service provider (Development Authority of the North Country – DANC) to install and test hardware firewall settings between the DANC layer 2 fiber/Ethernet switches and the NCTP member local area network (LAN).

Phase 2: Testing is also taking place between the NCTP member sites and the networks Internet Service Provider (ISP) Westelcom. Connection from the NCTP member to the public Internet is via the NCTP fiber/Ethernet intranet.

Phase 3 and 4: Both NCTP service providers, DANC and Westelcom, have begun providing FDRHPO with real-time network performance reports. These reports will allow FDRHPO to base-line the network in order to determine normal operational

parameters for end-to-end packet transmission and public Internet upload/download speeds.

Phase 5: FDRHPO is working with NCTP Hospital locations to identify VTC equipment, upgrade it where necessary and begin connecting the VTC equipment through the NCTP intranet. NCTP site-to-site VTC testing is expected to begin during the next quarter.

Phase 6: FDRHPO is working with the individual NCTP member locations to identify, evaluate and test Telemedicine applications. The first Telemedicine application to be tested was in support of Telepsychiatry (see Task 5).

**Task 9 (Months 10 – 16):** FDRHPO worked with the IT departments of all of the NCTP locations to evaluate the level of training/knowledge of the technicians tasked with operating and maintaining the NCTP intranet and public Internet connections. Of the NCTP hospital and primary care sites located within the Fort Drum region (Jefferson, Lewis and Southern St. Lawrence Counties) it was determined that in-house expertise to connect to and manage the network as needed to support the deployment of telemedicine applications was lacking. To help improve the level of technical readiness FDRHPO has begun to roll-out network training to NCTP technicians.

The North Country Telemedicine Project network was activated on 1 April 2010. The current network is comprised of 8 rural hospitals, 7 primary care facilities, 4 mental health clinics, 3 specialty clinics and 4 urban hospitals. Most of the facilities have some form of Cisco Systems networking equipment (switches, routers or firewalls). FDRHPO is providing Cisco Certified Network Associate (CCNA) training to our members, followed by a 3-day instructor led training that will focus on configuring firewalls and creating secure network connections. This training will enable all of the NCTP members to have on-site technicians who are able to make changes to their current network configurations (routers, switches and firewalls) with little or no additional support from outside contractors, vendors or service providers.

Most routers and switches on the market today have either a graphical user interface (GUI) or a command-line interface (CLI) and some have both. The CLI is the most common interface because it's the cheapest to implement. Cisco's market share in Ethernet switches (at the time of this report) is 68.5% and their market share in service provider Ethernet routers is 52.9%. Technicians who attend the FDRHPO funded CCNA training will also be able to configure other vendor's routers and switches because a large percentage of the vendors in the market place use a CLI that is based in whole or in part on the Cisco CLI. The CCNA training will help the technicians to develop a practical understanding of the operation of modern TCP/IP networks built with routers and switches. They will also learn the commands and techniques used to troubleshoot host connections, interact with switches and routers, backup and restore configuration files, and manage network equipment using the command line interface.

The CCNA training will be computer based training (CBT). The technicians/students will have 45 days to complete the training. The CBT's actually allow them to connect to real equipment via a web application so they will be able to practice using the command line interface (CLI). This gives them feedback from real equipment as opposed to other training courses that only offer a "router simulation" program that runs on the CD.



Once they've completed the CCNA training FDRHPO will arrange to have them attend a 3 day instructor-led training class on the Cisco Adaptive Security and Appliance (ASA) firewall and virtual private networks (VPNs).

The NCTP network is made up of 100Mbps or 10Mbps fiber/Ethernet connections on a layer 2 virtual local area network (VLAN). Each hospital has 11 VLANs and all of the other locations have 3 VLANs. While not every location has a Cisco based firewall they will all need to be able to configure IPsec AES VPNs (site-to-site). This training will help the NCTP technicians understand how to set up a VPN between 1 or more locations. This is a three day course that will address the basic setup and configuration of a firewall, associated concepts, configuration of access control lists (ACLs), VPNs, network address translation (NAT) and logging. This course is designed to provide the training necessary to strengthen the NCTP technicians understanding of core firewall design, function, management, and implementation.

**Task 10 (Months 24 – 48):** Not Applicable at this time.

**Task 11 (Months 36 – 48):** Not Applicable at this time.

In the event a project deliverable is not achieved, or the work and deliverables deviate from the work plan, the selected participant must provide an explanation.

The timeframes for the table in paragraph 8b have been updated to reflect the award date of the funding commitment letter (FCL) received by FDRHPO in August 2009.

**9. Provide detail on whether network is or will become self sustaining. Selected participants should provide an explanation of how network is self sustaining.**

**Project Sustainability Plan**

Project Director: Denise K. Young

**Plan Narrative**

Sustainability is the ability of the Fort Drum Regional Health Planning Organization's (FDRHPO) North Country Telemedicine Project (NCTP) initiative to thrive and grow beyond the initial implementation. Expanded use of telemedicine, continued development of electronic health records, and electronic information sharing will require continued availability of this network. Each new development using this technology will increase the importance of sustaining the NCTP initiative.

**Project Champions**

The project champions for this specific project include Denise Young (Executive Director), Robert Hunt (Regional Telemedicine Project Manager), Kevin Mastellon (Board Member and Committee Chair) of the FDRHPO. The health care participating entity project champions are Skip Edie (CIO) of River Hospital, Jeff Wood (Technical Services Manager) Samaritan Medical Center, Corey Zeigler (CIO) of Canton-Potsdam Hospital, Glenn Clark (Information Systems Director) Carthage Area Hospital, John Smithers (Network Administrator) E. J. Noble Hospital, Eric Burch (CEO) Lewis County General Hospital, Steve Potter (Information Systems Manager) Clifton-Fine Hospital, Terry Wagner (CIO) of SUNY Upstate Medical, Bob Gillette (Director of Information Technology) of St. Elizabeth Hospital, Chuck Fennell (VP of Information Management) of St. Joseph's Hospital, and Marc Gibbs (CIO) of Crouse Memorial Hospital.

**Commitments from Network Members**

All of the health care entities connecting to the fiber network have agreed to maintain their commitment to the NCTP for as long as the project is able to reduce facility costs and continues to improve customer care.

### Source for 15% Funding

FDRHPO has received a federal appropriation that will pay for the 15% non-recurring construction costs. *The Federal Appropriation Number that covers those funds is APPN 97 9 0130.881.* The 15% funds for the recurring non-construction costs will be paid by the participating healthcare entities listed in the sustaining budget plan accompanying this plan.

### Anticipated Future Funding Streams

Anticipated future uses are currently under development and include telemedicine to perform mental and behavioral health outpatient services, telecardiology, and telestroke services. Tertiary care centers in the region are preparing a catalog of services they are able to provide and those they seek to actively develop. Continuity of operations is made possible by implementation of but a few such programs. These programs will provide the fiscal support needed to sustain the network and continue expansion of telemedicine in the region using these resources and are a key component factored into the estimated cost savings and revenue increases identified in the sustainability budget of this plan.

This project will form strong relationships between public and private organizations that will use and value telemedical capabilities. These relationships, coupled with entrepreneurial vigilance, will seek to identify and pursue additional opportunities. We understand that telemedicine doesn't simply bridge the geographic gap. It is also technology that will make available advances never before thought possible. The desire of the participants to pursue collaborative endeavors in this arena is evident and will continue to grow.

### Upfront Charges

This project has selected Development Authority of the North Country (DANC) as its network vendor. DANC is providing FDRHPO service for a specified amount of bandwidth (10M or 100M) for each of the sites listed in the sustaining budget plan located on the pages that follow the section titled, "Conclusion – Collective Benefit."

During the construction phase DANC will install the connection from the FDRHPO facilities to the DANC network. DANC will then terminate that connection using their equipment. DANC's Open Access Telecom network (OATN) platform will provide FDRHPO maximum flexibility to add new services or increase bandwidth at the initial FDRHPO locations. The OATN will also allow the FDRHPO to seamlessly add new sites to the existing network. DANC's broadband service will be connected to the facilities (listed in the sustaining budget plan) via single-mode Corning SMF-28E fiber optic cable constructed as lateral cables from the existing OATN ring backbone facility.

DANC is responsible for maintaining the equipment for the entire period described in the lease with FDRHPO. FDRHPO does not own the fiber or the equipment that terminates the fiber. The FDRHPO facilities are treated as stub locations on the DANC network. There are no other entities on the dedicated fiber connection and there are no other entities sharing the fiber connection between the FDRHPO facilities and the DANC network. All traffic originating or terminating on an FDRHPO facility will traverse the DANC network via dedicated virtual local area network (VLAN) connection. No invoices for any equipment or services will be authorized by FDRHPO to DANC until (1) after the installation and services have commenced and (2) prior to Fiscal Year 2009, which starts on 1 July 2009.

### Monthly Lease Option

FDRHPO will be paying for the leased connections on a month-by-month basis; the terms of the contract that covers the monthly recurring payment costs are in force for 4 years from the initial start of service for each site connecting to the DANC fiber network. Beyond the initial 4 year term of the contract monthly recurring costs for each site are projected to be renegotiated at approximately the same cost as in years 1 and 2 of the current contract (see Column E of the budget plan). This configuration is similar to Scenario 9 of the "Excess Bandwidth and Excess Capacity Scenarios" document. The primary difference is FDRHPO will pay monthly for the service connection based on a 4 year contract with the vendor (DANC) instead of prepaying up front for a 10-15 year period. The provider (DANC) will continue to provide FDRHPO access to the DANC network based on the current pricing model for years 1 and 2 (see Column E of the budget plan) for an additional 10 – 15 years (assuming that the connection speeds remain at 10Mbps or 100Mbps).

### Use of the Network by Non-Eligible Entities

FDRHPO does not own the network. We are only paying for access to the providers (DANC) network. Ineligible entities that want or need to connect to this fiber network will pay their own installation and service charges for their own fiber connectivity directly to the provider (DANC). FDRHPO will not pay any costs or use any funds for non-eligible entities.

#### Funding in the Regular RHC Program

At this time we have not included any budget references for sites that meet the eligibility requirements for the regular RHC funding program. FDRHPO may apply for funding for these sites (River Hospital, Clifton-Fine Hospital and Lewis County General Hospital) at a future date.

#### State and Federal Funding

FDRHPO is not using any state or federal funding to sustain the network.

#### Management of the Network

The FDRHPO will oversee the project, through its Regional Telemedicine Project Coordinator. In addition to the coordinator, the project team will consist of committees representing the North Country hospitals, the urban hospitals, and the Development Authority of the North Country (DANC). DANC will manage the installation and management of the Network.

The Regional Telemedicine Project Coordinator, who is a staff member of the FDRHPO, will carry out the following responsibilities:

- Act as central project contact
- Represent FDRHPO to DANC during network construction
- Provide staff support to all committees
- Manage relationships with and between the hospitals
- Initiate and train staff on telemedicine process
- Oversee efforts to begin payer reimbursement
- Track outcomes
- Track budget
- Analyze cost efficiency
- Evaluate when/if new services or providers are needed
- Prepare FCC grant reports
- Seek alternate sources of funding
- Seek alternate uses of the network—e.g., CME, NYSERNet research, etc.

The lease agreement calls for DANC to provide Network Management as part of the lease service. The DANC network and the stub facilities directly connected to the DANC network (see the list of sites shown in the sustaining budget plan) are monitored by DANC on a 24x7 basis via a variety of methods and systems. DANC's network monitoring operation utilizes several servers that monitor the elements of the network infrastructure. The status of each device is checked routinely and the Network Operation Staff is notified by several methods in the event of a failure. FDRHPO will be notified of an outage immediately after the problem has been identified.

#### Anticipated Future Cost Savings and Network Sustainability

The smaller clinics included in this project will have direct access to hospital resources. These resources include patient registration and management applications, electronic health record information, and telemedical services performed by a wider variety of specialties than the clinics can provide organically. The regional hospitals will have access to the clinic operations and electronic health records, which will provide a more seamless style of health care. The efficiency created by combining and joining resources is the other component factored into cost savings and revenue increases identified in the sustainability budget portion of this plan.

The North Country Telemedicine Project incurs most of its costs during the construction of the fiber optic stub connections between the participating healthcare entities, listed in the sustaining budget plan, and DANC's Open Access Telecom Network (OATN). Once the fiber optic stub connection is built, with all 28 connection sites live, the ongoing costs of the network still represent only a fraction of what the majority the facilities are currently paying for

telecommunications services. The cost savings from an overall network standpoint are significant even without taking into account the clinical cost benefits that will be realized when patients are retained via telemedicine consults.

Network Management costs are built into the monthly recurring charges. Funds provided by the FCL will cover 85% of each sites cost for the first four (4) years of the project. The other 15% of the costs will be paid by the participating healthcare entities listed in the sustaining budget plan. The participating healthcare entities will be responsible for 100% of the monthly recurring charges in years five (5) through ten (10). These costs will be offset by projected future revenue streams and the overall reduction in network connectivity costs.

### Clinical Cost Benefit

Together, five specialties consisting of (1) general surgery, (2) cardiology, (3) gastroenterology, (4) oncology, and (5) pulmonology represent more than 20% of the cases that are transferred from the North Country to Syracuse. These cases also represent greater than 25% of the charges. Ultimately we found a cost differential for transferring as compared to retaining the case ranging from \$4,500 to more than \$11,000 per case, depending on type. Adjusting for those cases that would have to be transferred either because of acuity, patient preference or other reasons, we projected a potential cost savings of nearly \$4.11 million just for these five specialties. Retaining 5% of the other 30 specialties has the potential to realize another \$2 million in revenue for local hospitals. All told, retaining \$6 million worth of services in the North Country would equal a 4% improvement in local healthcare inpatient revenue.

At its core, telemedicine reallocates resources from a constrained location (the urban medical center) to sub-optimized, rural facilities. The downside to the urban facilities is relatively minor in comparison, as the total drop in case volume should have only a small impact on overall contribution margin. For these overburdened facilities, the opportunity to minimize transfer of less complex cases will allow them to improve throughput and concentrate care for higher acuity patients. Further, the addition of telemedicine has the potential of actually increasing referrals for cases that are more appropriate (and cost efficient) for the tertiary facilities, based on the stronger provider relationships that telemedicine creates.

### Reimbursement

As of September 1, 2006, both Medicare and Medicaid will reimburse telehealth services to some extent. Medicare will cover consultation, office visits, individual psychotherapy, and pharmacologic management delivered via a telecommunication system. Medicaid will pay for medically necessary emergency room and inpatient hospital telemedicine consultation by specialty physicians. CMS requires that both types of consultation be via a fully interactive audio and video telecommunications system that permits real-time communications between the distant site physician and the Medicare beneficiary<sup>1</sup>, while also supporting the review of diagnostic tests integral to the consultation.<sup>2</sup>

Of the projected revenue generated by the five specialties outlined in this project, nearly \$1.5 million derives from the cost savings of keeping the care local. The benefits to the payers include immediate cost savings, improved standardization of care, and decreased fragmentation, all leading to lower cost and higher value. Perhaps after initial demonstration of the project, the payers will be persuaded to reimburse this valuable service.

Currently none of the private payers reimburse for telemedicine, though payers in the Rochester region are considering demonstration projects for telemedicine coverage. The following chart outlines private payer percentages by product line, as a sum of Blue Cross, Commercial, and HMO.

Product Line	Payer	Percentage
Cardiology	Medicaid	10.2 %
	Medicare	53.3 %
Gastroenterology	Medicaid	9.5 %
	Medicare	42.3 %
General Surgery	Medicaid	9.8 %
	Medicare	35.6 %
Oncology	Medicaid	36.9 %
	Medicare	24.4 %
Pulmonology	Medicaid	16.4 %
	Medicare	48.3 %

<sup>1</sup> Medicare requirements

<sup>2</sup> Medicaid requirements

#### Enhanced Patient Care

Hospitals will be able access and share information between hospitals. Ventures by the regional hospitals into PACS with search and retrieve capabilities have already been researched as part of a HEAL NY grant submission. A verbal agreement exists between the information technology leaders of several of the hospitals. This agreement is to seek opportunities for collaboration in information technology. The agreement is that competitive interests are better served through other means and that technology should be a shared experience. This project is the cornerstone of such an effort.

Relationships between the tertiary care centers and regional hospitals will result in enhanced patient care. Telemedicine, distance learning, and continuity of care are supported by this project. The opportunity now exists to fashion a more cohesive network similar to a Regional Health Information Organization. This will position the region to more readily implement and adopt the emerging EHR standards.

#### Conclusion – Collective Benefit

All involved parties have much to gain or lose in sustaining this project. The larger organizations will create the support programs that include service for the smaller ones. Ultimately, the loss of capability would have a significant negative impact all participants. Therefore, the collective benefit will be sustained through continued collaboration and development of this technology. The collective organizations are already spending a significant amount on lower bandwidth and less efficient technology than the Ethernet fiber this project will provide. Funding for continued support of this resource will come from the individual organizations some of which will be offset by the dollars being invested in the current connectivity and through hard cost savings and increased revenue streams. Each of these items has been included in the sustaining budget plan.

In addition, grant dollars will be sought for telemedicine equipment and electronic medical record interfacing opportunities that will increase the ability to efficiently deliver services and sustain the network. However, expected grant dollars were not included in the sustainability budget as they are a moving target and do not provide a sustainable funding stream.

Fort Drum Regional Health Planning Organization North Country Telemedicine Project (NCTP) 27 Participating Entities (NOTE: Sites 20 & 21 are co-located)												
Site	Organization	Minimum Existing B/W	(1) Current Monthly Cost for Existing Bandwidth	(2) Monthly Cost Years 1 - 2 10MB Clinics 100MB Hospitals	(2) Monthly Cost Years 3 - 4 10MB Clinics 100MB Hospitals	(3) Cost Savings from Telemedicine	(4) New Revenue from Telemedicine	Monthly Cost Savings + New Revenue	New Bandwidth Cost Not Offset by Savings or Revenue (Years 1 - 2)	New Bandwidth Cost Not Offset by Savings or Revenue (Years 3 - 4)	Gain for Site: Years 1 and 2 Current Monthly Cost Minus New Bandwidth Cost Not Offset by Savings or Revenue	Gain for Site: Years 3 and 4 Current Monthly Cost Minus New Bandwidth Cost Not Offset by Savings or Revenue
1	Canton-Potsdam Hospital	T-1	\$1200	\$2,100	\$200	\$1000	\$900	\$1900	\$200	-\$1700	\$1000	\$2,900
2	Carthage Area Hospital (CAH)	T-1	\$1200	\$2,100	\$200	\$1000	\$900	\$1900	\$200	-\$1700	\$1000	\$2,900
3	CAH/Cape Vincent Family Health Center	Cable	\$600	\$1000	\$100	\$500	\$400	\$900	\$100	-\$800	\$500	\$1400
4	CAH/Evans Mills Family Health Center	Cable	\$600	\$1000	\$100	\$500	\$400	\$900	\$100	-\$800	\$500	\$1400
5	CAH/Carthage Physical Therapy Clinic	Cable	\$600	\$1000	\$100	\$500	\$400	\$900	\$100	-\$800	\$500	\$1400
6	Carthage Mental Health Clinic	Cable	\$600	\$1000	\$100	\$500	\$400	\$900	\$100	-\$800	\$500	\$1400
7	Carthage Veterans Administration Clinic	Cable	\$600	\$1000	\$100	\$500	\$400	\$900	\$100	-\$800	\$500	\$1400
8	Clifton-Fine Hospital	T-1	\$1200	\$2,100	\$200	\$1000	\$900	\$1900	\$200	-\$1700	\$1000	\$2,900
9	Crouse Hospital	T-1	\$2,000	\$2,100	\$200	\$600	\$1200	\$1800	\$300	-\$1600	\$1700	\$3,600
10	E. J. Noble (EJN) Health Center	Cable	\$600	\$1000	\$100	\$500	\$400	\$900	\$100	-\$800	\$500	\$1400
11	E. J. Noble (EJN) Health Center	Cable	\$600	\$1000	\$100	\$500	\$400	\$900	\$100	-\$800	\$500	\$1400
12	E. J. Noble (EJN) Hospital	T-1	\$1200	\$2,100	\$200	\$1000	\$900	\$1900	\$200	-\$1700	\$1000	\$2,900
13	Jefferson County Public Health Service	T-1	\$600	\$2,100	\$200	\$1000	\$600	\$1600	\$500	-\$1400	\$100	\$2,000
14	Lewis Cty. Community Mental Health Center	Cable	\$600	\$1000	\$100	\$500	\$400	\$900	\$100	-\$800	\$500	\$1400
15	Lewis County General Hospital	T-1	\$1200	\$2,100	\$200	\$1000	\$900	\$1900	\$200	-\$1700	\$1000	\$2,900
16	St. Elizabeth Medical Center	T-1	\$600	\$3,000	\$200	\$600	\$1200	\$1800	\$1200	-\$1600	-\$600	\$2,200
17	North Country Children's Clinic	T-1	\$1200	\$2,100	\$200	\$1000	\$400	\$1400	\$700	-\$1200	\$500	\$2,400
18	River Hospital	T-1	\$1200	\$2,100	\$200	\$1000	\$900	\$1900	\$200	-\$1700	\$1000	\$2,900
19	Samaritan Medical Center(SMC)	T-1	\$1200	\$2,100	\$200	\$1000	\$900	\$1900	\$200	-\$1700	\$1000	\$2,900
20	SMC Mental Health Clinic	Cable	\$1200	\$2,000	\$200	\$1000	\$900	\$1900	\$100	-\$1700	\$1100	\$2,900
21	SMC Clinic/Plaza Family Health Center	Cable										
22	SMC/Fort Drum Outpatient Mental Health Clinic	Cable	\$600	\$1000	\$100	\$500	\$400	\$900	\$100	-\$800	\$500	\$1400
23	SMC Clinic/Family Health Center	Cable	\$600	\$1000	\$100	\$500	\$400	\$900	\$100	-\$800	\$500	\$1400
24	SMC Urology Clinic	Cable	\$600	\$1000	\$100	\$500	\$400	\$900	\$100	-\$800	\$500	\$1400
25	St. Joseph's Hospital	T-1	\$2,000	\$2,100	\$200	\$400	\$1200	\$1600	\$500	-\$1400	\$1500	\$3,400
26	St. Lawrence County Public Health Dept.	T-1	\$600	\$2,100	\$200	\$1000	\$600	\$1600	\$500	-\$1400	\$100	\$2,000
27	SUNY Upstate Medical Center University Hosp	T-1	\$2,000	\$2,100	\$200	\$400	\$1200	\$1600	\$500	-\$1400	\$1500	\$3,400
28	Claxton-Hepburn Medical Center	T-1	\$1200	\$2,100	\$200	\$1000	\$900	\$1900	\$200	-\$1700	\$1000	\$2,900
											<b>\$19,400</b>	<b>\$60,500</b>
<p>This budget was developed based on the following assumptions:</p> <p>(1) Rural NCTP participating hospitals are paying minimum of \$1200 per month for a T-1, Public Health Departments are paying an average of \$600 per month for a T-1, participating rural primary care &amp; mental health clinics are paying an average of \$600 per month for Time Warner Cable Business Class connectivity and participating Urban Hospitals are paying an average of \$600 per month per T-1.</p> <p>(2) Monthly cost per 10MB and 100MB Ethernet connections as identified in DANC RFP response, Option 2 for years 1-2 and 3-4.</p> <p>(3) NCTP estimates that: rural hospitals will save at least \$1,000 per month by utilizing the bandwidth to do remote telemedicine consults rather than bringing the specialists to their facilities and rural clinics will save \$400-\$600 per month in staff costs by utilizing the broadband network to more efficiently use their supporting hospitals resources.</p> <p>(4) NCTP estimates that: urban hospitals will increase revenue by at least \$1,200 per month through providing telemedicine consults to rural sites, rural hospitals will increase revenue by at least \$900 per month and rural clinics will increase revenue by \$400-\$600 per month through the provision of new sub-specialty services only available through remote telemedicine consults.</p>												

Fort Drum Regional Health Planning Organization North Country Telemedicine Project (NCTP) 27 Participating Entities (NOTE: Sites 20 & 21 are co-located)									
Site	Organization	Minimum Existing Bandwidth	(1) Current Monthly Cost for Existing Bandwidth	(2) Monthly Cost Years 5 - 10 10MB Clinics 100MB Hospitals	(3) Cost Savings from Telemedicine	(4) New Revenue from Telemedicine	Monthly Cost Savings + New Revenue	New Bandwidth Cost Not Offset by Savings or Revenue (Years 5 - 10)	Gain for Site: Years 5 - 10 Current Monthly Cost Minus New Bandwidth Cost Not Offset by Savings or Revenue
1	Canton-Potsdam Hospital	T-1	\$1200	\$2,100	\$1,000	\$900	\$1900	\$200	\$1,000
2	Carthage Area Hospital (CAH)	T-1	\$1200	\$2,100	\$1,000	\$900	\$1900	\$200	\$1,000
3	CAH/Cape Vincent Family Health Center	Cable	\$600	\$1,000	\$500	\$400	\$900	\$100	\$500
4	CAH/Evans Mills Family Health Center	Cable	\$600	\$1,000	\$500	\$400	\$900	\$100	\$500
5	CAH/Carthage Physical Therapy Clinic	Cable	\$600	\$1,000	\$500	\$400	\$900	\$100	\$500
6	Carthage Mental Health Clinic	Cable	\$600	\$1,000	\$500	\$400	\$900	\$100	\$500
7	Carthage Veterans Administration Clinic	Cable	\$600	\$1,000	\$500	\$400	\$900	\$100	\$500
8	Clifton-Fine Hospital	T-1	\$1200	\$2,100	\$1,000	\$900	\$1900	\$200	\$1,000
9	Crouse Hospital	T-1	\$2,000	\$2,100	\$600	\$1,200	\$1,800	\$300	\$1,700
10	E. J. Noble (EJN) Health Center	Cable	\$600	\$1,000	\$500	\$400	\$900	\$100	\$500
11	E. J. Noble (EJN) Health Center	Cable	\$600	\$1,000	\$500	\$400	\$900	\$100	\$500
12	E. J. Noble (EJN) Hospital	T-1	\$1200	\$2,100	\$1,000	\$900	\$1900	\$200	\$1,000
13	Jefferson County Public Health Service	T-1	\$600	\$2,100	\$1,000	\$600	\$1,600	\$500	\$100
14	Lewis Cty. Community Mental Health Center	Cable	\$600	\$1,000	\$500	\$400	\$900	\$100	\$500
15	Lewis County General Hospital	T-1	\$1200	\$2,100	\$1,000	\$900	\$1900	\$200	\$1,000
16	St. Elizabeth Medical Center	T-1	\$600	\$3,000	\$600	\$1,200	\$1,800	\$1,200	-\$600
17	North Country Children's Clinic	T-1	\$1200	\$2,100	\$1,000	\$400	\$1,400	\$700	\$500
18	River Hospital	T-1	\$1200	\$2,100	\$1,000	\$900	\$1900	\$200	\$1,000
19	Samaritan Medical Center(SMC)	T-1	\$1200	\$2,100	\$1,000	\$900	\$1900	\$200	\$1,000
20	SMC Mental Health Clinic	Cable	\$1200	\$2,000	\$1,000	\$900	\$1900	\$100	\$1,100
21	SMC Clinic/Plaza Family Health Center	Cable							
22	SMC/Fort Drum Outpatient Mental Health Clinic	Cable	\$600	\$1,000	\$500	\$400	\$900	\$100	\$500
23	SMC Clinic/Family Health Center	Cable	\$600	\$1,000	\$500	\$400	\$900	\$100	\$500
24	SMC Urology Clinic	Cable	\$600	\$1,000	\$500	\$400	\$900	\$100	\$500
25	St. Joseph's Hospital	T-1	\$2,000	\$2,100	\$400	\$1,200	\$1,600	\$500	\$1,500
26	St. Lawrence County Public Health Dept.	T-1	\$600	\$2,100	\$1,000	\$600	\$1,600	\$500	\$100
27	SUNY Upstate Medical Center University Hosp	T-1	\$2,000	\$2,100	\$400	\$1,200	\$1,600	\$500	\$1,500
28	Claxton-Hepburn Medical Center	T-1	\$1200	\$2,100	\$1,000	\$900	\$1900	\$200	\$1,000
Total Network Gain by Sustaining Initiative (based on most conservative estimates)									\$19,400
<p>This budget was developed based on the following assumptions:</p> <p>(1) Rural NCTP participating hospitals are paying minimum of \$1200 per month for a T-1, Public Health Departments are paying an average of \$600 per month for a T-1, participating rural primary care &amp; mental health clinics are paying an average of \$600 per month for Time Warner Cable Business Class connectivity and participating Urban Hospitals are paying an average of \$600 per month per T-1.</p> <p>(2) Expected monthly cost per 10MB and 100MB Ethernet connections based on DANC RFP pricing in Option 2 for years 1 and 2..</p> <p>(3) NCTP estimates that: rural hospitals will save at least \$1,000 per month by utilizing the bandwidth to do remote telemedicine consults rather than bringing the specialists to their facilities and rural clinics will save \$400-\$600 per month in staff costs by utilizing the broadband network to more efficiently use their supporting hospitals resources.</p> <p>(4) NCTP estimates that: urban hospitals will increase revenue by at least \$1,200 per month through providing telemedicine consults to rural sites, rural hospitals will increase revenue by at least \$900 per month and rural clinics will increase revenue by \$400-\$600 per month through the provision of new sub-specialty services only available through remote telemedicine consults.</p>									

## 10. Provide detail on how the supported network has advanced telemedicine benefits:

- a. Explain how the supported network has achieved the goals and objectives outlined in selected participant's Pilot Program application;
  - The NCTP network has only been deployed for 12 months, the ongoing collaborative efforts between FDRHPO and participating entities are increasing awareness of the benefits of telemedicine and also identifying potential telemedicine application business opportunities.
- b. Explain how the supported network has brought the benefits of innovative telehealth and, in particular, telemedicine services to those areas of the country where the need for those benefits is most acute;

- The first Telemedicine application that has been brought on-line is in support of Telepsychiatry.

### 1. Participants:

- a. North Country Children's Clinic (NCCC) (FRN37176, 17236-01-0017)
- b. State University of New York (SUNY)/Upstate Medical Center (UMC) (FRN37176, 17236-01-0027)
- c. New York State (NYS) Office of Mental Health (OMH)

### 2. Equipment Vendors:

- a. SUNY/UMC: Polycom VSX 7000 Video Teleconference (VTC) System
- b. NCCC: Tandberg Edge 75 HD Video Teleconference (VTC) System

NYS OMH has authorized NCCC to participate in the New York Child and Adolescent Telepsychiatry (NYCAT) program. **About NYCAT:**

According to the Surgeon General, about 20% of children are estimated to have a mental disorder, with 5-9% of children having severe functional impairment or serious emotional disturbances. Of the total number of children and adolescents suffering at least mild functional impairment, fewer than 1 in 5 receive treatment. While it is estimated that approximately 33,000 child and adolescent psychiatrists are needed to adequately treat children in the U.S., there are only 7,000 child and adolescent psychiatrists in the U.S. today.

In recognition of this growing need, OMH's Division of Child and Family Services has established the New York Child and Adolescent Telepsychiatry (NYCAT) program. This initiative is currently funded to address child psychiatric consultation needs in areas with health care shortages. OMH has contracted with Columbia University's Division of Child and Adolescent Psychiatry and The Professional Practice Group (PPG) of the Department of Psychiatry at the SUNY Upstate Medical University to deliver psychiatric consultations. Columbia University will cover New York City, Long Island, and the Hudson River Regions. The Upstate Medical University PPG will cover the Western and Central Regions. NYCAT is a key component of the New York State Office of Mental Health's goal to increase access to appropriate and effective services.

- c. Explain how the supported network has allowed patients access to critically needed medical specialists in a variety of practices without leaving their homes or communities;
  - Our initial telemedicine application over the NCTP network, Telepsychiatry, allows young patients access to Psychiatric services without having to travel outside of their current location. Services are presented locally (Watertown, NY) from a Psychiatrist located remotely (Syracuse, NY). The two locations are 71.2 miles/81 minutes apart. The length of time required to drive between the two locations is significantly increased in winter months as average snowfall levels are in excess of 100" per year. The main route connecting the two locations is often shut down during the winter months due to excessive snow accumulation or due to lack of visibility during snow/sleet storms. The Telepsychiatry application eliminates the need for repeated cancellation of sessions during the winter months due to hazardous



driving conditions. For more information on the Telepsychiatry program see paragraph 10(b).

- d. Explain how the supported network has allowed health care providers access to government research institutions, and/or academic, public, and private health care institutions that are repositories of medical expertise and information;
  - The proposed network has only been operational for 9 months. No details on how the supported network has allowed health care providers access to government research/private research institutions at this time.
- e. Explain how the supported network has allowed health care professional to monitor critically ill patients at multiple locations around the clock, provide access to advanced applications in continuing education and research, and/or enhanced the health care community's ability to provide a rapid and coordinated response in the event of a national crisis.
  - The proposed network has only been operational for 9 months. No details on how the supported network has advanced allowed health care professionals to monitor critically ill patients at this time.

**11. Provide detail on how the supported network has complied with HHS health IT initiatives:**

- a. Explain how the supported network has used health IT systems and products that meet interoperability standards recognized by the HHS Secretary;
- b. Explain how the supported network has used health IT products certified by the Certification Commission for Healthcare Information Technology;
- c. Explain how the supported network has supported the Nationwide Health Information Network (NHIN) architecture by coordinating activities with organizations performing NHIN trial implementations;
- d. Explain how the supported network has used resources available at HHS's Agency for Healthcare Research and Quality (AHRQ) National Resource Center for Health Information Technology;
- e. Explain how the selected participant has educated themselves concerning the Pandemic and All Hazards Preparedness Act and coordinated with the HHS Assistant Secretary for Public Response as a resource for telehealth inventory and for the implementation of other preparedness and response initiatives; and
- f. Explain how the supported network has used resources available through HHS's Centers for Disease Control and Prevention (CDC) Public Health Information Network (PHIN) to facilitate interoperability with public health and emergency organizations.
  - The proposed network has only been operational for 12 months. No details on how the supported network has complied with HHS health IT initiatives are available at this time.

**12. Explain how the selected participants coordinated in the use of their health care networks with the Department of Health and Human Services (HHS) and, in particular, with its Centers for Disease Control and Prevention (CDC) in instances of national, regional, or local public health emergencies (e.g., pandemics, bioterrorism). In such instances, where feasible, explain how selected participants provided access to their supported networks to HHS, including CDC, and other public health officials.**

- The proposed network has only been operational for 12 months. No details for section 12 are available at this time.